Kuszmar, David@Waterboards

From: Ellen Riaboff <riaboff@comcast.net>
Sent: Wednesday, July 19, 2017 10:17 PM
To: Kuszmar, David@Waterboards
Subject: Water Quality Trading Framework for the Laguna de Santa Rosa Watershed

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Kuszmar:

I wish to give my support to the Resolution No. R1-2017-0027 and the attachment entitled *Water Quality Trading Framework for the Laguna de Santa Rosa Watershed*. We understand this is an optional program that is currently intended to help address Santa Rosa's (City) and Windsor's (Town) phosphorus limit of No Net Discharge in their NPDES Permit. It is my understanding that the City and Town will be able to buy credits from environmental projects (only those that are approved by your agency and none that are already regulated) that remove phosphorus from the Laguna de Santa Rosa environment in exchange for allowing similar amounts into the waterways through their treated wastewater discharges. We support your effort to control phosphorus pollution in both the Laguna area AND the lower Russian River.

Sincerely,

Ellen Riaboff

GOLD RIDGE
RESOURCE CONSERVATION DISTRICT

North Coast Regional Water Quality Control Board
Attn: David Kuszmar
5550 Skylane Blvd, Suite A
Santa Rosa, CA 95403-1072

July 21, 2017

RE: Comment Letter – Laguna WQT Framework

Dear David Kuszmar,

As one of California's Resource Conservation Districts (RCDs), we share the Water Board's mission to preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses. The Draft Water Quality Trading Framework for the Laguna de Santa Rosa is an excellent opportunity to for us partner on our shared missions and build support for locally led conservation.

Farming and a healthy farm economy play a critical role in local communities, in the social fabric of Sonoma County, and in the water quality of the Laguna de Santa Rosa and the Russian River watershed. We believed that preserving farms and open space is essential, because these lands serve as precious natural filters for our water.

We support the Laguna WQT Framework efforts "to implement more holistic nutrient reduction projects that are designed to improve conditions within the watershed while also reducing nutrient inputs not already addressed by a regulatory mechanism." And to that end, we believe that agriculture based projects can help the City of Santa Rosa and the Town of Windsor to meet pollution reduction needs through cost-effective and environmentally beneficial options.

Conservation practices, frequently called best management practices, or BMPs, are tools that farmers can use to reduce soil erosion, properly manage animal waste, and protect water and air quality on their farms.

Through the RCDs development of LandSmart plans over 300 nonpoint source on-farm practices have been identified on approximately 2,200 acres of non-dairy livestock (equine, poultry, sheep and goat operations) property within the Laguna de Santa Rosa watershed. Types of practices identified include practices related to stormwater management (i.e. installation of roofs, gutters, downspouts), manure management (i.e. construction of manure

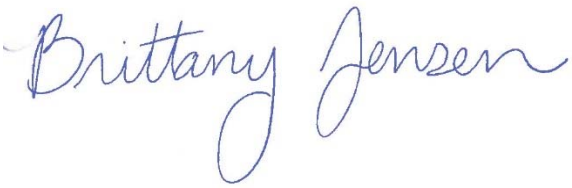
bunkers, composting manure, proper spreading) and pasture management (i.e. fencing for rotational grazing, water development for improving livestock distribution).

Implementation of these practices is not currently required under a regulatory permit and because of this they could be potential candidates for funding through the WCT Framework.

The RCDs would support the inclusion of on-farm practices to be included in the WCT Framework proposed.

Thank you for your consideration of our recommendations. We welcome discussing this further with you.

Sincerely,



Brittany Jensen
Executive Director

Laguna de Santa Rosa Foundation

900 Sanford Road
Santa Rosa, CA 95401
Ph. 707.527.9277
Fx. 707.527.5075
www.lagunafoundation.org

David Kuszmar
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

July 21, 2017

Re: Water Quality Trading Framework for the Laguna de Santa Rosa Watershed

Dear Mr. Kuszmar,

The Laguna de Santa Rosa Foundation broadly supports the water quality trading framework proposed by the Regional Water Board. We feel that water quality credit trading can be an important part of a larger water quality strategy in the Laguna de Santa Rosa watershed. That said, we are concerned that this type of program could tend to favor projects that are quick, cheap, and easy to measure, but would be unlikely to result in lasting improvement in water quality. As a result, short-term pollution reduction projects could be favored over large-scale, long-term restoration projects. We support the Water Board's inclusion in the framework of the flexibility to adjust the trading ratio downward for particular trades. We would like to see this section expanded to encourage a longer list of circumstances, including the following:

1. Long-term -Projects that have the potential to continue to positively impact water quality for years into the future should be prioritized over one time clean-up projects. This should include permanent protection and an adaptive management plan.
2. Large-scale -Larger projects are more difficult to fund but ultimately provide greater benefits.
3. Open to public scrutiny – Public confidence in the process is important and public access to both the project site and the monitoring data should be encouraged.
4. Other water quality benefits – While this framework is intended to focus on phosphorus the Laguna de Santa Rosa watershed is listed for multiple impairments and they are all interdependent. Improvement in temperature and dissolved oxygen will positively impact phosphorus cycling.
5. Designed to enhance environmental values (already included).
6. Direct measurement of pollutant reductions (already included).

In addition, it might be appropriate to allow certain types of projects to be banked for a longer period of time. For example, a long-term project that directly measures pollutant reductions might generate credits that could be banked for five discharge season rather than three, assuming that they could prove that the project was performing as anticipated.

The Approved / Pre-qualified Practices will be critical to the success of this program. The standards for pre-qualification must be rigorous so that the practices will be effective and transparent. This, however, does represent a substantial burden to the organizations that are creating the supporting documentation. If the Water Board were to make funding available for local groups to prepare and submit the supporting documentation necessary to get a practice pre-qualified it could expedite the process and ensure that credit generating projects are available.

Thank you for all your hard work on this project. We appreciate the opportunity for public comment and look forward to working with you to implement this framework.

Sincerely,

Dr. Wendy Trowbridge
Director of Restoration and Conservation Science Programs
Laguna de Santa Rosa Foundation
wendy@lagunafoundation.org
(707) 527-9277

COAST ACTION GROUP 126 STEINER CT, SANTA ROSA 95404

Mat St. John , Executive Officer
Regional Water Quality Control Board, Region 1
5550 Skylane Blvd
Santa Rosa, CA 95403

July 7, 2017

Subject: Water Quality Trading Framework – Laguna de Santa Rosa
R1-2017-0027

Dear Mr. St John:

Coast Action Group and Northern California River Watch are interested parties in this proposed action. CAG and NCRW have a long history of interest in water resource actions on the Russian River and Laguna de Santa Rosa. CAG participated in the Laguna impaired listing process, City of Santa Rosa Wastewater NPDES, flow issues, historic pollutant trading programs and, in general, water quality issues on the Russian River and the Laguna.

General and Specific Comments

First: CAG's initial (historic) comments on the first two offset projects were directed at serious deficiencies in those projects and how the offset trading program was being used. We are generally very pleased and supportive of the changes that you have made to the proposed policy. However, there are some issues (there always are) that need consideration.

The concept of offsets to gain purchase on water quality improvement (control of pollutants – and restorative processes) is technically and managerially challenged. There is plenty of room for error. We think that the proposed methodology (related considerations) has addressed most issue.

Succinct and enforceable language must be put in place to ensure that offsets will not be considered for actions or conditions that are otherwise regulated. Offset credit should not be available for conditions that are currently in violation of State Water Code or the Basin Plan.

In the assessment of offset projects – analysis should be provided that demonstrates assurance, with a margin of safety, that the pollution reduction and related benefits be attained (or expected to be attained) is commensurate with the offset credit allowed.

Credit Banking should be permissible (if all standards are met) – with some flexibility allowed for the expiration term of the banked credits. Your customers (City of Santa Rosa, and Windsor

to date) will be more available to enter into projects if the term of the credits can be extended for some reasonable period (greater than 3 years).

We see the largest problem (issue) facing the proposed offset program as the yet to be completed TMDL for the Laguna de Santa Rosa. This TMDL will set – through assessment of pollutant source contributions – the allocated responsibility of all dischargers. Until such assessment of source allocations – pollutant source responsibility is really unknown. Currently the City of Santa Rosa and the Windsor wastewater treatment discharge NPDES have a ZERO net loading allocation for phosphorus. This ZERO net loading is in place as those are the only two P sources that can be absolutely controlled as point sources. The TMDL may (or may not) change source allocation responsibility – and – such changes may affect how the Regional Board and the cities look at offsets and how they should be applied.

Thus, we suggest (as several of your Board members have suggested) that you complete the TMDL for the Laguna de Santa Rosa ASAP.

We thank you for the work and progress you have shown on this issue

Sincerely,

Alan Levine for Coast Action Group

.

TOWN OF
WINDSOR

Town of Windsor
9291 Old Redwood Highway
P.O. Box 100
Windsor, CA 95492-0100
Phone: (707) 838-1000
Fax: (707) 838-7349

www.townofwindsor.com

July 20, 2017

Regional Water Quality Control Board
Attn: David Kuszmar
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Sent Via: Electronic submission to NorthCoast@waterboards.ca.gov and David.Kuszmar@waterboards.ca.gov

Subject: Town of Windsor written comments, Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed

Dear David,

Please accept the following comments regarding the Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed (WQT Framework).

Overall, the Town of Windsor (Town) supports the Draft WQT Framework and believes there are many components to the program that support a successful implementation. However, there are a few areas of concern, listed below, for ensuring that the WQT Framework is both sustainable and equitable:

1. The limitation on credit stacking (p.11) should be restrictive only for other nutrient offsets. If a project generates credits for phosphorus in addition to another environmental benefit, those credits should be permitted to be applied to both credit applications with no detriment to the overall value as long as their environmental markets are different. The Town agrees that credit projects in the same environmental market (i.e. nutrients) should not be allowed to "double dip" on the credits generated.
2. At the hearing on June 29, 2017, comments were verbally submitted by other parties requesting that physical sampling be used rather than modeling to quantify water quality credits. The Town requests that the Board continue to value how burdensome excessive monitoring can be on NDPES dischargers and credit generators. Using pre-established pollution reduction rates and models should continue to be appropriate methods of quantifying water quality credits, and may be supplemented by direct monitoring as necessary.
3. The Town is very supportive of the authority granted to the Regional Water Board Executive Officer to allow retirement and/or uncertainty ratios to be adjusted downward (p.11). Each project may have different components that would make it appropriate to reducing the ratios. In addition to the circumstances listed in the WQT Framework, the Town believes the Executive Officer should also be permitted to adjust retirement and/or uncertainty ratios downward when the applicant can demonstrate that uncertainly is lower than typically expected, and in cases where the Regional Water Board would like to provide additional incentives for pursuing high-priority projects.
4. The Town has concerns that the third-party verifier qualifications and role are not clear (p.16). This requirement should be explained in more detail to clarify what characterizes a third-party verifier as qualified, and what the next steps are should there be a discrepancy between the third-party verifier and credit

generator's verification reports. Third-party verifiers are given a substantial amount of responsibility and their verification reports can carry great consequences to credit generators. Due to the significance of their role, the Town has concerns that third-party verifiers can drastically alter the landscape of the WQT Framework if guidelines are not more defined.

5. The Town strongly encourages the Regional Water Board to reconsider its position on credit expiration (p.13). This component is the most critical to making the credit trading program successful and fair. Currently, the WQT Framework proposes that credits are permitted to be banked for a period of three years/discharge seasons. After this period, if credits are not used they shall be retired. Purchasing credits or conducting credit generating projects that retire in three years is not a responsible use of ratepayers' dollars. Variability in weather patterns and unanticipated operational projects can make it extremely difficult to predict the amount of credits that will be necessary to be banked to maintain compliance with its NPDES permit. The nature of the credit program is that an NPDES discharger must bank more credits than is anticipated being needed in order to have a certain safety factor to ensure continued compliance. While the Town appreciates improving environmental conditions, it is extremely difficult to justify allocating public funds toward credits that will not ultimately benefit the compliance of the Town. The current policy also discourages credit generators from pursuing projects that have a larger net environmental benefit. Projects that create a larger number of credits per year run a higher risk of banking credits that will not be used, resulting in a waste of invested resources.

The Town reiterates its strong support for moving forward with a total phosphorus TMDL. Currently, the Town of Windsor and the City of Santa Rosa are disproportionately carrying the burden of addressing the nutrient impairment in the Laguna watershed. Implementation of a TMDL would have a greater net benefit and would more equitably distribute the responsibility of successfully addressing water quality impairments.

Thank you for your willingness to collaborate with stakeholders to develop a WQT Framework that can be practically implemented. Please direct any questions regarding these comments to Veronica Astells, Environmental Program Manager at vastells@townofwindsor.com or 707-838-1218.

Thank you,

A. M. Bertolero

Toni Bertolero
Public Works Director/Town Engineer

e-copy:
Linda Kelly, Town Manager
Veronica Astells, Environmental Program Manager
Rita Miller, City of Santa Rosa

I:\80 - Public Works\Environmental Programs\WQ Credit Trading\Board Correspondence\7.20.17 Town of Windsor WQT Framework Comments.docx

Kuszmar, David@Waterboards

From: shelley trimm <shelleytrimm@outlook.com>
Sent: Wednesday, July 19, 2017 2:33 PM
To: Kuszmar, David@Waterboards
Subject: Water Quality Trading Comments

Importance: High

July 19, 2017

Mr. David Kuszmar, PE
Watershed Protection Division, TMDL Unit
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A,
Santa Rosa, CA 95403
(delivered via E-mail to David.Kuszmar@waterboards.ca.gov)

Dear Mr. Kuszmar,

I am writing to provide comments on the "Attachment 1 to Resolution No. R1-2017-0027, Water Quality Trading Framework for the Laguna de Santa Rosa Watershed, Public Review Draft, June 14, 2017. (draft Framework) I want to see the draft framework strictly adhere to the Guiding Principles of Sound Science, Accountability, Transparency and (public) Accessibility to ensure any transactions are held to the same standards required of NPDES Point Sources in the Federal and State Clean Water Act. In general I think it is dishonest to call this a Water Quality Trading program since it is proposed to conduct trades for POLLUTANTS and polluted runoff not Clean Water or Water Quality so it should be called what it really is, a Water Pollution Trading program and not spin reality.

I believe there are too many avenues to avoid meeting the 4 key principles listed above and offer the following suggestions to remedy those deficiencies:

1. Currently only the two point source dischargers the City of Santa Rosa and the Town of Windsor would be able to use the draft Framework, prior to any new discharger or Permittee enrollments in this program we want to see the adopted Framework re-opened concurrently with the required permit updates for any new enrollees in a public hearing process.

2. I want the Framework to incorporate a "local advisory group" with a diverse membership including citizens, local water advocates, scientists, engineers and academia that is independent of parties associated with implementing the draft Framework similar to the State of Washington's program to provide input on pre-qualification of eligible trading practices OR a full public hearing process to fully vet any practices proposed for pre-qualification.

3. I do not support ANY trading activity with unregulated non-point sources, either generators or sellers, who discharge Phosphorous and have no baseline requirements. Any eligible party or credit generation MUST be meeting current EPA Water Quality Standards for Phosphorous for Freshwater bodies in Aggregate Ecoregion

III of 0.022mg/L to comply with North Coast Basin Plan requirements.

4. Prior to any trading commences with parties other than the City of Santa Rosa and Town of Windsor's POTW's, we expect that TMDL's are developed for any new parties like all other trading programs on the West Coast.

5. I expect that when new pre-qualified practices are approved, site specific pre and post project water quality monitoring be conducted during rain events, when pollutants are discharged, to ensure the accuracy of computer models to determine credit quantification amounts generated from actual measured reductions in Phosphorous actually meet estimates provided in the pre-qualified practices process. Once confidence is established to the satisfaction of the local advisory group mentioned above then computer modeling could be used to determine credit generation based on the actual modeling data. Anything less does not meet the strict monitoring and reporting requirements of Point Source NPDES permits and address the high level of uncertainty with certain trading practices in addition to credit ratios to address uncertainty.

6. I strongly support this program providing funds to large long –term restoration projects that either reduce legacy phosphorous in the Laguna or improve the Laguna's ability to process and sequester nutrients in vegetation such as riparian trees. These projects have a long project life and can generate credits for many years providing a stable credit mechanism to assist Windsor and Santa Rosa in meeting permit limits. In order to encourage such projects we support a more favorable credit-banking scenario than three years for any such restoration projects such as five years, but I don't support credit banking in perpetuity. In addition, any credit generating practices that provide only an annual benefit should not be allowed to bank beyond one year since those practices do not produce an enduring benefit.

7. Last I expect that the Water Pollution Trading program credit certification, registration and tracking information as well as all associated documents related to pollution reduction activities to achieve baseline requirements for Phosphorous such as Farm Plans be available to the public via a website to be equivalent to public disclosure requirements for all NPDES point source permittees including all verification data and site specific monitoring and all data associated with any computer modeling along with all raw data and assumptions.

As Water Pollution Trading is not expressly authorized in the Clean Water Act, we expect the above comments to be incorporated into the draft Framework prior to adoption later this year to be consistent with NPDES requirements so that this program complies with the mandates of NPDES permits.

Thank you for the opportunity to comment on this document.

Sincerely,
Shelley Trimm
Santa Rosa, CA 95401
shelleytrimm@outlook.com

The Freshwater Trust™
Changing the course of conservation.

700 SW Taylor Street, Suite 200
Portland, Oregon 97205
503.222.9091 MAIN OFFICE
www.thefreshwatertrust.org

July 21, 2017

Matthias St. John, Executive Officer
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403-1072

Re: Resolution No. R1-2017-0027 and the Laguna de Santa Rosa Water Quality Trading Framework

Dear Mr. St. John,

The Freshwater Trust (TFT) provides the following comments on the proposed Draft Water Quality Trading Framework for the Laguna de Santa Rosa Watershed ("Framework") and Resolution No. R1-2017-0027. TFT would like to first congratulate the Regional Board and staff on completing the Framework. The draft Framework reflects the dedication and effort of all staff involved, and is an important milestone toward further improving the health and vitality of the Laguna de Santa Rosa watershed. TFT does, however, have comments that we believe will further improve the Framework and facilitate a more robust water quality trading program.

Founded in 1983, TFT is a 501(c)(3) not-for-profit conservation organization committed to accelerating the pace and scale of restoration of freshwater ecosystems. Over the past 30 years, we have conducted numerous river restoration projects to fulfill grant obligations as well as compliance obligations under the ESA and the Clean Water Act (CWA). Over the last decade, TFT has collaborated with numerous stakeholders and regulators to help pioneer the use of water quality trading across the West. TFT currently manages two trading programs in Oregon, and is helping to build out a major compliance program for Idaho Power Company in the Snake River watershed. In addition, TFT has been an active partner in the development of the regulatory infrastructure for trading in Oregon and Idaho, as well as a steering committee member of the National Network on Water Quality Trading. TFT has also consulted with several California entities on how trading can help them address their water quality and quantity needs. These experiences have taught us many important practical lessons about how to formulate a successful water quality trading program. We now bring these lessons to bear in our comments on the draft Framework.

TFT believes the following topics warrant further reflection by the Regional Board. In particular, these comments aim to ensure the Framework provides: (1) the assurance that the expenditure of public conservation funding remains consistent with statutes, TMDLs, existing state policy, and sound public policy, (2) sufficient support and explanations for the chosen trading ratios, (3) detailed and unambiguous guidance for baseline evaluations, and (4) the minimization of transactional costs to encourage efficient program operation.

Financial Additionality: The Use of Public Conservation Funds for Credit Generation

TFT encourages the Regional Board to more fully consider its proposed authorization of the use of public conservation dollars to fund the cost of generating water quality credits. The use of public conservation funds for credit generation is problematic both legally and practically. To be clear, leveraging public conservation funds to pursue larger and more integrated restoration projects represents an important and useful tool to achieve greater environmental benefit than could be realized with compliance funds alone, but funds specifically earmarked for environmental benefit should not be used to generate credits to meet a regulatory compliance obligation. In particular TFT recommends the Regional Board require the use of a robust accounting system that proportionally discounts credits generated based on the portion public conservation funds used for project implementation. Such a system ensures that the intention of those funds—to generate environmental benefit that would not accrue otherwise—is realized, while providing trading participants with the ability to leverage public dollars for greater ecological gains.

The Framework's current approach puts the onus on the source of environmental improvement funds to prevent the diversion of those dollars to compliance programs, a strategy that could be improved to better uphold public expectations. As drafted, Section 3.2.6 of the Framework would allow the generation of credits from any program funded entirely by public conservation dollars as long as the source of those funds does not explicitly prohibit credit generation for legal compliance. This means that if that entity fails to include such a prohibition in authorizing or enabling law, and those funds are instead used to pay for compliance credits, that the funds' originally intended purpose may not be realized. As a result, those funds—which were authorized for a specific environmental purpose—may not generate the ecological improvement that would have otherwise been realized absent trading. Such a policy is inconsistent, in most cases, with the intent of those public conservation programs' statutory or ballot measure language, the existing TMDLs and associated nonpoint implementation plans, which rely on the funding from voluntary conservation programs to help meet nonpoint source requirements as part of the basis for obtaining EPA "reasonable assurance" approval of the TMDLs, the existing mitigation banking policy and other analogous policies in the state,[1] and sound public policy as it sets a precedent that allows public conservation funds to pay for compliance obligations.

Leveraging multiple sources of funding provides the opportunity to implement larger-scale projects, but such action must be carefully tracked. As noted in the National Network on Water Quality Trading summary document, "trading programs should not shy away from applying multiple sources of funding, but need to be clear about which funding is generating which water quality benefits, and for whom."[2] Financial additionality is the evaluation of the funding sources for restoration actions and the benefits from which a permittee is seeking water quality credits. The analysis is meant to address two issues: first, whether there is authorization or restriction for the use of funding for credit

[1] CAL. NATURAL RES. AGENCY, DEP'T OF FISH & WILDLIFE, CONSERVATION & MITIGATION BANKING GUIDELINES, 11 (Aug. 2014). These Guidelines state, "Lands may be unsuitable to become mitigation or conservation banks if ... acquired or conserved using public funding sources." Similarly, federal guidelines prevent the creation of conservation banking credits using federal funding. U.S. Dep't of Interior, Fish and Wildlife Service, Guidance for the Establishment, Use, and Operation of Conservation Banks, 6 (May 2003). Although neither of these policies details the scope of restrictions on using public conservation funds, they evidence an intention to limit the diversion of environmental improvement dollars to compliance purposes.

[2] NAT'L NETWORK ON WATER QUALITY TRADING, BUILDING A WATER QUALITY TRADING PROGRAM: OPTIONS & CONSIDERATIONS, 63 (2015).

generating actions (e.g., funding is authorized for restoration actions); and second, whether the environmental or water quality benefits of those actions have already been counted or utilized for an alternative program and may therefore no longer be available (e.g., avoiding "double-counting" the same benefits from a project for wetland mitigation under Clean Water Act Section 404 as well for water quality credits under Clean Water Act Section 401).[3]

The goal of the financial additionality analysis is to understand which funds are generating which benefits, and which of those benefits can therefore be counted as credits. A financial additionality review is particularly important to understand the purposes and constraints underlying the funds and to clarify whether funding used for voluntary conservation actions (so-called "public conservation funds"[4]) may be used to generate water quality compliance credits.

TFT does not believe that using public funds is in and of itself inappropriate. For instance, when public funds are used in conjunction with other sources of financing, the result can be larger projects and broader watershed improvement than would have been possible otherwise. Water quality trading programs to date have treated projects using public conservation funds in one of three ways:

1) No credits may be generated from a project in which conservation funds are used for any portion of that project (e.g., Virginia[5]);
2) A proportional accounting[6] of project credits whereby the total credit benefits are subdivided proportionally by the portion of the overall cost paid for with conservation funds (e.g., Oregon,[7] Idaho,[8] and Maryland[9]); or

---

[3] *Id.* at 62–63.

[4] "Public conservation funds" have been defined as "funds targeted to support voluntary natural resource protection and/or restoration, with a primary purpose of creating, restoring, enhancing, or preserving habitats. Some examples include Farm Bill Conservation Title cost share and easement programs, U.S. EPA 319 funds, U.S. Fish and Wildlife Service Partners for Wildlife Program, state wildlife grants, and other sources. Green infrastructure investments, such as public loans intended to be used for capital improvements of public wastewater or drinking water systems (e.g., State Clean Water Revolving Funds and USDA Rural Development funds), utility stormwater and surface water management fees, and public funds raised from ratepayers are not public dollars dedicated to conservation." WILLAMETTE PARTNERSHIP & TFT, DRAFT REGIONAL RECOMMENDATIONS FOR THE PACIFIC NORTHWEST ON WATER QUALITY TRADING 93–94 (Aug. 2014).

[5] VA. DEP'T ENVTL. QUALITY, TRADING NUTRIENT REDUCTIONS FROM NONPOINT SOURCE BEST MANAGEMENT PRACTICES IN THE CHESAPEAKE BAY: GUIDANCE FOR AGRICULTURAL LANDOWNERS & POTENTIAL TRADING PARTNERS (2008) ("any BMP enhancement (e.g., early cover crop, continuous no-till) for which you received state or federal cost-share payments is not eligible to generate offsets").

[6] Under this approach, the benefits generated from the project site are subdivided proportionately by eligible and ineligible financial contributions. This allows project developers to "demonstrate which benefits are attributable to public dollars dedicated to conservation, and which benefits are attributable to other sources of money (and this can be sold as credits)". NAT'L NETWORK ON WATER QUALITY TRADING, BUILDING A WATER QUALITY TRADING PROGRAM: OPTIONS & CONSIDERATIONS, 98 (2015).

[7] The Oregon trading rules define public conservation funds as "public funds that are targeted to support voluntary natural resource protection or restoration. Examples of public conservation funds include [USDA] cost share programs, [EPA] section 319 grant funds, [US FWS] Partners for Fish and Wildlife Program funds, State Wildlife Grants, and Oregon Watershed Enhancement Board restoration grants. Public funds that are not considered public conservation funds include: public loans intended to be used for water quality infrastructure projects, such as Clean Water State Revolving Funds, USDA Rural Development funds, and utility sewer storm water and surface water management fees." OR. ADMIN. R. 340-039-0005(4). "Credits generated under an approved trading plan may not include water quality benefits obtained with public conservation funds. Where public sources of funding are used for credit-generating activities, it is the entity's responsibility to demonstrate compliance with this requirement in its annual report." *Id.* at 340-039-0040(4).

[8] ID. DEP'T OF ENVTL. QUALITY, DRAFT WATER QUALITY TRADING GUIDANCE, 12 (Mar. 2016) ("the proportion of a credit-eligible project funded by public dollars dedicated to conservation cannot be used to generate credit").

[9] MD. DEP'T OF AGRIC. & DEP'T OF ENV'T, DRAFT MD. TRADING & OFFSET POLICY & GUIDANCE MANUAL CHESAPEAKE BAY (2017); MD. DEP'T OF AGRIC., DRAFT MARYLAND POLICY FOR NUTRIENT CAP MANAGEMENT AND TRADING IN MARYLAND'S CHESAPEAKE BAY WATERSHED: PHASE II – A GUIDELINES FOR THE GENERATION OF AGRICULTURAL NONPOINT NUTRIENT CREDITS, 11 (2008) ("Practices funded with Federal or State cost-share funds can generate credits in proportion to the landowner/operator's share of the project costs").

3) An entire project is fully creditable no matter how much is paid for with conservation funds (e.g., Pennsylvania[10]).

The no credits (Virginia) and fully creditable (Pennsylvania) approaches are binary: either 0% or 100% of the project benefits can be credited. The proportional accounting approach requires a closer analysis because it attempts to strike a balance between leveraging public conservation funds to expand projects, and concerns related to funding authorization and double-counting. The National Network on Water Quality Trading has taken the position that proportional accounting represents the most feasible alternative.[11] USDA regulations likewise do not restrict the use of voluntary and compliance funds at the same project site, but seek to ensure that if this happens, that the original purpose of the USDA funding is still met.[12] Within the proportional accounting approach, one can apply an "intent" approach, a "spatial" approach, or a blend of the two.

Under the intent approach, one tact is to allow for credit to be taken only when the funding has been specifically authorized for generating water quality benefits for compliance. An alternative approach is to allow for credit to be taken from all funding sources unless the funding source specifically prohibits the use of those funds for the purpose of generating credits. In contrast to the intent approach, the spatial approach determines how and where money from different sources was used at a project site, and divides the benefits consistent with spatial locations at the site.

The Regional Board should consider the potential repercussions of the chosen financial additionality position in terms of legal defensibility, the precedent it sets in California (and the relationship to other programs around the country), and the environmental impact. TFT encourages the Regional Board to consider other options pertaining to the use of public conservation funds dollars to generate credits that better balances competing factors. This balance should be consistent with the intent of public conservation programs, existing state agency declarations on this matter, sound public policy, and the incentives required to elicit participation in a water quality trading program.

Trading Ratios to Address Uncertainty & Ensure Environmental Benefits Accrue

TFT appreciates that trading ratios have been included in the framework as a mechanism to both address uncertainty and to guarantee a benefit to the environment. However, the Framework's discussion of trading ratios in Section 5 does not contain a sufficiently detailed explanation of the rational basis underlying the chosen ratios. This lack of explicit technical basis for the chosen ratios is problematic in light of the downward adjustment component of the trading ratios, particularly for the retirement ratio. Including some justification to support the chosen ratios would bolster the defensibility of the Framework. TFT does not offer a specific ratio recommendation, but does encour-

[10] 25 PA. CODE § 96.8(e)(4)(ii) (2016) ("If State or Federal funds are used to cost-share any portion of the pollutant reduction activity contained in the request for certification, the Department may allow the portion of the credits or offsets paid for by State and Federal funds to be available for certification, unless to restrict trading of that portion of the credits restrictions have been placed on the funds by the provider of the funds").

[11] NAT'L NETWORK ON WATER QUALITY TRADING, BUILDING A WATER QUALITY TRADING PROGRAM: OPTIONS & CONSIDERATIONS, 62 (2015) ("[Proportional accounting] may be more complex to administer ... [but] is generally viewed as a good compromise").

[12] "A participant in EQIP may achieve environmental benefits that may qualify for environmental credits under an environmental credit-trading program. NRCS asserts no direct or indirect interest on these credits. However, NRCS retains the authority to ensure that EQIP purposes are met. In addition, any requirements or standards of an environmental market program in which an EQIP participant simultaneously enrolls to receive environmental credits must be compatible with the purposes and requirements of the EQIP contract and with this part." 7 C.F.R. § 1466.36(a)

age the Regional Board to develop a ratio approach that considers the appropriate ratio factors (discussed below), and that is technically supportable and documented. TFT believes that a more detailed explanation for factors underlying the trading ratios would improve the transparency, defensibility, and predictability of the Framework. This would also potentially allow for project-specific ratios in varying circumstances, providing greater flexibility than even the downward adjustment factors, while doing so within the confines of a strong, transparent structure. Accordingly, TFT details some considerations related to instream projects that could be used to justify the Regional Board's ratio decisions.

Project Failure or Underperformance Uncertainty

If an instream project adheres to the quality standards and guidelines during design and implementation, the risk of project failure or underperformance is low. Yet, there are still a number of risks to be addressed. External factors, such as natural disturbances, may result in project failure or underperformance. External factor ratios have not generally been included in nascent water quality trading programs, but have been developed in some carbon trading markets. For example, the California EPA, Air Resources Board (CARB) developed an approach to support the quantification of carbon from activities on forestland, which includes a method to determine risk of natural disturbances.[13] The method includes risk factors for: wildfire, disease or insect outbreak, and other episodic catastrophic events. For instream restoration projects, similar types of episodic events include drought and flooding.[14] The CARB method includes default values for many risk factors. This approach and the natural disturbance risk values should be adapted to the Framework's approved project types.

---

[13] CAL. ENVTL. PROT. AGENCY, COMPLIANCE OFFSET PROTOCOL FOR U.S. FOREST OFFSET PROJECTS (Oct. 2011). In this protocol, the equation for *Combined Risk = 1 – [(1 – Wildfire%) x (1 – Disease%) x (1 – Flooding%) x (1 – Drought%)].*

[14] Episodic events, such as droughts or floods, may result in the loss of site ecological function. To assess the likely risk requires two factors: probability of loss and magnitude of loss. The CARB Compliance Offset Protocol includes a default risk factor of 3%. To refine this value for instream projects, TFT recommends inclusion of expected drought and flood recurrence intervals into a risk rating. During the life of a project, a large-scale flood event, such as a 100-year flood, could result in damage to a project site and create an associated loss in function. Instream restoration projects are designed to improve ecosystem function, including resilience to natural disturbances. For a 100-year event, the annual probability of flooding is 1%. Over the life of a 20-year project, the probability that a site will experience a 100-year event during the project life is 18.2%, and can be calculated using the following: *Probability of episodic event= 1-(1-p)^n*, where *p* is the annual probability of a flood event at the site (e.g. 0.01 for a 100-year event) and *n* is the number of years in the period of interest (e.g. 20 for an instream project with a life of 20-years). The loss of function at a project site due to a flood will be dependent on the size of the flood event. For the purposes of assessing project failure, a loss of 10% of project function is assumed to occur due to a 100-year from flood events. Loss of function includes impacts to the channel dimensions or loss of established vegetation. Thus, multiplying flood probability by the magnitude of the potential loss, the total risk of benefit loss due to flooding for the life of a 20-year project with a maximum channel capacity of a 100-year flood event is 1.8%. When using this equation, it is important to utilize the project specific characteristics to determine the appropriate values for n and p. The value for n should be based on the project life (partially determined by the legal safeguards in place to protect the site, as well as the period that the project is expected to provide water quality benefits). The value for p for extreme flood events should be selected given the capacity of the instream project channel. That is, p should be selected to reflect the first flood event that exceeds the capacity of the channel.

Periods of extreme drought can result in plant mortality in riparian areas. In the cases where the water quality benefits of an instream project rely on the presence of vegetation, this loss in vegetation can impact project performance. While the planting of native riparian vegetation will alleviate many of the impacts of shorter, less severe events, during periods of severe or chronic drought it is likely some plant mortality will occur. With any loss of vegetation, there will be a corresponding reduction in potential water quality benefits at an instream project site. The goal of this risk factor is to capture the potential loss in function due to extreme drought. The loss of function at a site due to the impacts of drought will vary with the magnitude of the event. The risk of drought is calculated using the above equation (using the same example as above, p=0.01, n=20), however, the expected loss of water quality benefits is higher as a result of plant mortality. To assess risk, the loss of function is assumed to be 25%. After multiplying the drought probability by the magnitude of the potential loss, the total risk of benefit loss due to drought for the life of a 20-year project is 4.6 %.

Quantification Uncertainty

Uncertainty associated with instream project types varies considerably based on the type of project and the quantification method used for that project. Projects that rely on modeling, scientifically based calculations, and information from the available literature may have higher rates of uncertainty than those based on direct measurement. TFT therefore recommends that the Framework include a more nuanced explanation of ratio options and how those ratios might change based on the project type and quantification methodology used:

- *Citing to scientific literature that documents nutrient cycling and deposition rates for specific projects:* Nutrient removal values for instream projects vary in the literature, introducing some uncertainty into the benefit quantification. The studies report uncertainty or variability in net removal rates. For projects that increase lateral connectivity, these net removal rates range from 11% to 31%, with a mean of 20%.[15]
- *Identifying estimated project effectiveness rates:* A project effectiveness rate reduces the modeled or calculated sediment load reduction expected from an instream restoration project to account for the fact that a project will not be able to eliminate 100% of streambank erosion. As a result, the nutrient and sediment benefits associated with a project have been shown to be 50% of the modeled or calculated sediment and nutrient load.[16] Project monitoring may be used to adjust the effectiveness rate if it is able to demonstrate that efficiency rates at the site are higher than 50%.
- *Including studies that measured loading to calculate nutrient reductions and associated water quality benefits:* Projects that use direct measurement of nutrient reductions do not need an additional factor to account for uncertainty associated with quantification, provided that sufficient nutrient sampling is completed to capture on-the-ground variability.

Attenuation

Pollutant attenuation can occur due to the relative location between a project and the waterbody of concern. Attenuation can result from the potential assimilation of nutrients as a result of watershed conditions, or as a result of active maintenance activities. The inclusion of an attenuation ratio can help address the potential loss of benefit.

The primary waterbody of concern in the Framework is the mainstem Laguna. Projects implemented on the mainstem Laguna will be directly beneficial. Recent work has identified that the mainstem Laguna and its floodplain retain the majority of the incoming sediment load, and only 5% of the sediment load is delivered to the Russian River.[17] Therefore, it may be that no attenuation ratio is necessary, and if the Regional Board agrees, TFT recommends that this finding be included in the Framework. On the other hand, while no attenuation ratio is necessary for projects on the mainstem Laguna, a different dynamic exists for projects in tributaries to the Laguna. Accordingly, The Trust recommends that the location of projects be considered when considering attenuation ratios.

---

[15] T. SCHUELER & B. STACK, CHESAPEAKE STORMWATER NETWORK & CENTER FOR WATERSHED PROTECTION, RECOMMENDATIONS OF THE EXPERT PANEL TO DEFINE REMOVAL RATES FOR INDIVIDUAL STREAM RESTORATION PROJECTS (2014).

[16] *Id.*

[17] Tetra Tech, Inc., Laguna de Santa Rosa Nutrient Analysis (2015).

Time to Benefit

The instream restoration projects contemplated for the Laguna and its tributaries involve large-scale changes to the physical characteristics of the river channel. Instream projects are implemented within a short time period, from a few weeks to a few months. Once construction is complete, these restoration projects will immediately begin to provide water quality benefits to the ecosystem. While the growth of any planted vegetation will take time, the primary driver of the water quality benefits is the change in channel dimensions. As such, TFT does not believe that an additional factor is necessary to account for a delay in water quality benefits from instream restoration projects.[18]

Baseline for Credit Generation

Baseline is a complicated concept that often generates confusion among water quality trading stakeholders. To avoid this confusion, TFT recommends that the Regional Board supplement Section 3.2.2 of the Framework with more specificity on the regulatory sources of baseline applicable to the trading area. Making the discussion of baseline more robust would better achieve EPA's direction in the 2003 Trading Policy to unambiguously "describe how baselines and conditions or limits for trading have been established and how they are consistent with water quality standards."[19]

EPA's Water Quality Trading Toolkit defines baseline as "the pollution control requirements that apply to a buyer and seller in the absence of trading."[20] Where no TMDL exists, as is the case in the Laguna de Santa Rosa, the 2003 U.S. EPA Trading Policy states that baseline "should be the level of pollutant load associated with existing land uses and management practices that comply with applicable state, local or tribal regulations."[21] The difficulty is translating the broad directive in the Framework that baseline requirements "shall 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" into the level of pollutant load associated with existing land uses and management practices as applied to specific projects. In confronting this issue, Oregon recently adopted regulations to govern water quality trading programs that meaningfully delve into sources of baseline. The rules start by defining baseline as, "Pollutant load reductions, BMP requirements, or site conditions that must be met under regulatory requirements in place at the time of trading project initiation."[22] The regulations also explicitly define the requirements for baseline as:

(1) Trading baseline must account for the following regulatory requirements applicable to the trading project at the time of trading project initiation:
  (a) NPDES permit requirements;
  (b) Rules the Oregon Department of Agriculture issued for an agricultural water quality management area under OAR chapter 603 division 095;
  (c) Rules the Oregon Board of Forestry issues under OAR chapter 629 divisions 610-680;

[18] This contrasts with riparian restoration projects and some other best management practices, which may take months or years for the benefits to meaningfully accrue.
[19] U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. 1608, 1611 (Jan. 13, 2003).
[20] U.S. EPA, Water Quality Trading Toolkit for Permit Writers, EPA 833-R-07-004 (Aug. 2007, rev. June 2009).
[21] U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. 1608, 1610 (Jan. 13, 2003).
[22] Or. Admin. Rules § 340-039-0005(6).

(d) Requirements of a federal land management plan, or an agreement between a federal agency and the state;
(e) Requirements established in a CWA Section 401 water quality certification;
(f) Local ordinances;
(g) Tribal laws, rules, or permits;
(h) Other applicable rules affecting nonpoint source requirements;
(i) Projects completed as part of compensatory mitigation, or projects required under a permit or approval issued under Clean Water Act section 404, or a supplemental environmental project used to settle a civil penalty imposed under OAR chapter 340 division 012 or the Clean Water Act; and
(j) Regulatory requirements a designated management agency establishes to comply with a DEQ-issued TMDL, water quality management plan or another water pollution control plan adopted by rule or issued by order under ORS 468B.015 or 468B.110.

(2) BMPs required to meet baseline requirements and BMPs used to generate additional water quality benefits and trade credits may be installed simultaneously.[23]

This explanation of baseline in the Oregon rule provides a level of clarity exceeding that of the proposed Framework. Furthermore, Oregon expanded upon the rules by issuing an Internal Management Directive that dedicates several pages to detailing the differing baselines under various scenarios.[24] Without such clarity as to the particular sources of baseline that must be considered, it is easy to conflate general principles of additionality with specific application of baseline obligations to projects. Because baseline is a foundational component of credit calculation, the concept should not entail any ambiguity, and so TFT recommends that the Regional Board explicitly identify the sources of baseline that will apply to credit projects covered by the Framework. In the geographic area covered by the Framework, TFT believes that the following sources of baseline, and potentially others not included here, should be added to such a list:

- NPDES Permit requirements;
- State laws and regulations, such as the Porter-Cologne Water Quality Act and the California Environmental Quality Act;
- Requirements of a federal or state land or watershed management plan, or an agreement between a federal agency and the state;
- Requirements established in a Clean Water Act Section 401 water quality certification,
- Projects completed as part of compensatory mitigation, or projects required under a permit or approval issued under Clean Water Act section 404, or a supplemental environmental project used to settle a civil penalty;
- Local zoning ordinances or codes, city and county plans, and any applicable development guidelines;
- Tribal laws, rules, or permits;
- Other applicable rules affecting nonpoint source requirements; and
- Regulatory requirements a designated management agency establishes to comply with any applicable TMDL, basin plan or another water pollution control plan.

[23] *Id.* at § 340-039-0040.
[24] Or. Dep't of Envtl. Quality, Internal Management Directive: Water Quality Trading (Mar. 31, 2016).

The Framework as currently drafted also contains some potentially confusing discussion in Section 3.2.3—Applied Timing of Baseline Requirements. That provision states, "All applicable baseline requirements must be met *before any approved project is allowed to generate credits* under this WQT Framework." While not technically inaccurate, this provision suggests that satisfaction of baseline obligations must occur prior to implementation of a credit generating project. In actuality, projects commonly satisfy baseline requirements in conjunction with implementation of the credit generating project components. Thus, TFT recommends a revision to clarify that 'baseline requirements must be met before or simultaneous to any approved project is allowed to generate credits….'

Transactional Efficiencies and Clarifications

Beyond the comments on larger-scale components of the Framework, TFT has a number comments on discrete provisions. These points share a common theme: to increase program efficiency, reduce transactional costs, and ease the burden to engage in trading without sacrificing programmatic robustness. Specifically, TFT would like to bring the following points to the Board's attention:

Section 3.2.1—Avoiding Localized Impacts

- The EPA has stated that water quality trading may not result in the creation of localized impairments to water quality. The inclusion of a provision in the Framework reiterating this point is important. Yet, as currently drafted, the localized impact provision is a source of uncertainty and confusion, particularly the direction that credits offset pollution "in place, in kind, and in time." For the specific approved project actions, TFT recommends replacing this ambiguous statement[25] with a much clearer statement that ensures that entities purchasing credits from dispersed nonpoint source projects are not causing localized "hot spots" through continued discharges of nutrients into the Laguna de Santa Rosa. A localized impacts assessment should address the following: (1) near-field analysis of potential impacts on local aquatic biota from a facility's effluent; (2) comparison of effluent data to relevant regional numeric nutrient criteria; and (3) consideration of all parameters that may have a negative impact on biota.[26]

Section 7.1—Credit Project Plan

- The Project Maintenance Plan, a component of the overarching Project Plan, lacks some of the requirements common in other trading programs that ensure the anticipated environmental benefits accrue. This section currently requires project developers to include a "description of the maintenance contracts and/or project protection agreements (if any)." The associated footnote clarifies that project site leases or easements are optional. TFT recommends that the Regional Board require an agreement that provides access to and legal protection of the project area against other dissonant land uses for, at minimum, the entire credit life, and ideally, for the maximum projected project life. In addition to

[25] All three aspects of this statement appear to be covered more clearly in different parts of the Framework. Ostensibly, "in place" means within the trading area defined by the Framework, but this is ambiguous. "In kind" appears to suggest that a credit project should yield pollutant reduction benefits of the same pollutant for which an entity is generating or purchasing a credit. And "in time" suggests that the benefits of the projects should accrue in the same time period—ostensibly the 3-year banking period identified in the Framework—as the discharge being offset.

[26] For an example of how to frame a localized impact assessment, *see* OR. ADMIN. RULES § 340-041-0053(2)(d), which apply in the thermal trading context in Oregon.

helping to ensure environmental benefits for a longer period of time, such agreements can help reduce the transaction costs of recruitment and contracting, and improve the security for entities relying on those contracts. Moreover, from a Regional Board perspective, requiring contracts helps minimize agency exposure to cases of double-counting.

- The Project Design and Credit Information component of the Credit Project Plan lists a number of items that need to be identified in order for a project to garner approval. This list, while relatively encompassing, lacks two important items—the baseline analysis for a particular project (e.g., a description of the applicable baseline requirements and a discussion of how those requirements have been satisfied), and the financial additionality description (if any other public funds have been used at the project). Because doing so would entail a minor amount of additional effort, TFT recommends that the Regional Board add these two items to the list in order to improve the accountability and transparency of any credit generating projects.

- The Credit Project Plan component of the Framework does not include any provisions on adaptive management. TFT believes that adaptive management constitutes an important aspect of water quality trading as it helps to guarantee that the projects are evaluated on an ongoing basis and improvements are made as the understanding of those sites develops. Requiring adaptive management of credit project sites and reports to the Regional Board on the status of adaptive management ensures that project sites are improved and maintained as necessary, and that calculation methodologies and assumptions can be improved for future credit sites. This would not require much additional effort as the ongoing evaluations of projects should already be occurring, an adaptive management provision would simply require credit generators to detail and report those findings.

Section 7.2 & 7.3—Credit Project Plan Approval Process & Optional Pre-Screening

- The Framework identifies a process for pre-qualifying conservation practices. It is unclear what the benefit of this pre-qualification process is in light of the later project approval process. If a conservation practice is pre-approved with associated quality standards, then projects designed and implemented consistent with the pre-approved practice should be eligible. As written, however, the pre-qualification process represents an additional burden on regulators and the project developers that does not appear to generate any additional certainty given the need to also go through the credit project plan approval process. TFT recommends that the Regional Board maintain the pre-qualification process, but adjust the project approval process to one that ensures that the individual project has been designed and implemented consistent with the pre-approved practice documentation. This streamlined approach will minimize redundancy, thus reducing the transactional burden and associated costs for both the Regional Board and for project developers. If the Regional Board does see an additional benefit to project plan approval, the Regional Board should clarify what that benefit is in the Framework and detail how the pre-qualification, project pre-screening, and project approval processes efficiently work in conjunction with one another.

Section 8—Initial & Ongoing Project Verification

- Section 8.2 of the Framework currently requires initial project verification following the implementation of a credit generating project, TFT supports post-implementation confirmation that a project has been installed properly and is likely achieve the anticipated benefits. However, the Framework calls for this review to be based on the Credit Project Plan. This seems like a redundant step given the other project requirements. Instead, TFT recommends that initial project verification should compare the as-built project against the pre-qualified project standards (as projects often evolve from pre-project planning stages). This would likely improve efficiency for all involved, thereby improving the trading program generally.

- The Framework requires ongoing project verification as a condition of maintaining credits. TFT strongly supports the use of ongoing verification as a means to guarantee project efficacy and to demonstrate that environmental benefits continue to accrue. This transparency and oversight represents an important component of any water quality trading program. Likewise, TFT approves of the provisions that detail what happens in the event that a project does not meet applicable standards and requirements. However, it is unclear what "a failure to meet approved practice standards or other requirements of an approved Credit Project Plan" specifically entails. In particular, TFT recommends that the Regional Board clarify the threshold for the "failure to meet" language. Credit projects are bound to differ in minor ways from the project design due to on-the-ground practicalities and a number of other factors associated with installing credit projects in dynamic riverine environments. If every minor difference could potentially trigger the need to notify the Board and submit a plan for remedy, it would place a serious burden on both trading participants and the agency staff. Therefore, TFT recommends that the Regional Board include a more definitive "materiality" standard. A "material failure to meet" threshold would provide a greater level of predictability to trading participants, and clarify what deviations are within the realm of appropriate adaptive management versus those that are significant enough to warrant Regional Board involvement and remedy.

In the end, TFT congratulates the Regional Water Quality Control Board staff on developing a strong water quality trading framework. This represents a significant step forward for both the environment and the regulated community in California. TFT applauds the efforts of all those involved in developing this Framework, as it is a thorough and robust guidance for water quality trading activities in the Laguna de Santa Rosa.

Thank you very much for your consideration of these comments.

Sincerely,

David Primozich
Conservation Director, The Freshwater Trust
(503) 222-9091 ext. 19
Primozich@TheFreshwaterTrust.org.

Food & Water Watch • 1616 P St. NW, Suite 300 • Washington, DC 20036
T +202.683.2500 • F +202.683.2501 • foodandwaterwatch.org

July 21, 2017

Via email: northcoast@waterboards.ca.gov

Re: Food & Water Watch Comments on the Water Quality Trading Framework for the Laguna de Santa Rosa Watershed

On behalf of Food & Water Watch and our more than 8,000 supporters located in Sonoma County we hereby file these comments on the proposed water pollution trading framework ("Framework") recently published by the North Coast Regional Water Quality Control Board ("Board"). For the reasons cited below, the pollution trading program as proposed violates the federal Clean Water Act ("CWA" or "Act"). The CWA does not allow for the use of credits by point sources of pollution to exceed permit limitations. To the contrary, pollution trading is inherently antithetical to the goals of the CWA; while the Act calls for the elimination of pollution from our waterways, water pollution trading sanctions acceptable discharges of pollution under a market scheme of credit swapping. As a result, the trading program as outlined in the proposed Framework is illegal and may subject the Board's action to approve it to legal challenge.

In addition, the proposed Framework is an irresponsible abdication of the Board's responsibility to oversee and regulate pollution discharges to the region's waterways. Allowing polluters to purchase their way out of CWA permit compliance will likely result in worsening water quality in the watershed. Water pollution trading — or water quality trading, as it is often called by proponents — is an overly complex and convoluted system of pollution control that is inherently subject to mismanagement and ineffectiveness. Even more disconcerting is the lack of polluter accountability built into water pollution trading schemes, including the proposed Framework. Individual polluter accountability is the hallmark of success of the CWA and its implementing regulations, while water pollution trading is designed and implemented so that polluters can evade responsibility for their discharges to our waterways.

The Board should reject water pollution trading as a mechanism to address phosphorus pollution in the watershed. Instead, the CWA should be rigorously enforced against all point source polluters and the Board should exercise its authority to mandate best management practices and other pollution reduction strategies in the nonpoint source sector. Pollution trading is simply another voluntary approach; for decades, the watershed's agricultural operations have failed to do their share to reduce phosphorus discharges to watersheds across the country. To implement yet another voluntary compliance approach with the nonpoint source agricultural sector means that the Laguna de Santa Rosa watershed is not likely to achieve its water quality goals.

The Board relies on various documents in the proposed Framework, including the National Network on Water Quality Trading's ("NNWQT") "Building a Water Quality Trading

Program,"[1] a manual detailing its views on what it called "successful" pollution trading programs. But the NNWQT report builds off a false foundation, incorrectly claiming that pollution trading is "guided by the same goals as those set out in the Clean Water Act."[2] The Board also purports to rely on EPA's trading guidance and permit writers' guide, yet both of these documents themselves deviate from the goals and requirements of the CWA, and both fail to provide a statutory basis for trading. Moreover, as described below, the proposed Framework contradicts these documents in multiple ways. The Board simply cannot simply rely on private industry reports and non-binding guidance to authorize a fundamental change in the way it regulates water pollution. It must adhere to the requirements of the CWA, and this proposal fails to do so.

I. APPLICABLITY OF CALIFORNIA'S CEQA PROCESS

The Regional Water Board's attempt to avoid conducting a California Environmental Quality Act ("CEQA") analysis of the Framework as a whole is improper, and its piecemeal approach of conducting environmental review only of individual proposed trades will result in inadequate consideration of the scheme's cumulative impacts. This Framework expands on the existing Santa Rosa offset program that itself raised serious questions about whether the Regional Board has complied with its CEQA obligations. The Board should analyze, based on the entire record before it, whether the proposed Framework would have a significant effect on the environment; since the record as it exists now supports a finding of a probable significant environmental impact, the Board should then conduct an Environmental Impact Report ("EIR") pursuant to CEQA.

A. The Framework is subject to CEQA because the Framework is a "project"

Under CEQA, the Regional Board must analyze and determine whether a proposed project would have a significant effect on the environment and either, if it determines that the project would not have a significant effect, adopt a negative declaration or, if it determines that the project would have a significant effect on the environment, prepare an EIR.[3] The Framework meets the statute's definition of a "project," which includes an activity that involves a public agency issuing a permit or other entitlement for a use where the activity "may cause either a direct physical change in the environment, or "a reasonably foreseeable indirect physical change in the environment."[4] The Framework is such an activity, because before a discharger may purchase pollution credits, the Board must issue an NPDES permit that explicitly allows the discharger to purchase credits and then issue an entitlement to an approved credit generator to

[1] Willamette Partnership, World Resources Institute and National Network on Water Quality Trading, *Building a Water Quality Trading Program: Options and Considerations*, *Version 1* (June 2015).
[2] *Id*. at 3.
[3] Cal Pub Resources Code § 21080(c)-(d).
[4] Cal Pub Resources Code § 21065.

sell any credits, both in accordance with the Framework's requirements.[5] This Framework will therefore have a "reasonably foreseeable indirect physical change in the environment."[6]

Although the Board has attempted to describe the Framework as just a procedural document and the trades themselves as the "project" for CEQA analysis, this inappropriately mischaracterizes the nature of the Framework. A project is "the whole of the action" being approved, and even where the activity being approved is "subject to several discretionary approvals," the "term 'project' does not mean each separate governmental approval."[7] It is improper for the Board to avoid CEQA's requirements by conducting a piecemeal review—"chopping a large project into many little ones—each with a minimal potential impact on the environment —which cumulatively may have disastrous consequences."[8]

B. The Framework does not qualify for the CEQA exemptions cited by the Board

The Regional Board's claim that the Framework is exempt from CEQA analysis not only mischaracterizes the action but also incorrectly applies the cited CEQA exemptions. First, the Framework is neither an agency action for the protection of natural resources nor an agency action for the protection of the environment.[9] As discussed below, the Framework is actually likely to degrade water quality and adversely affect the environment. This action is more accurately characterized as an attempt to provide NPDES permit holders with more lenient alternatives to complying with their permit limits. The Board cannot legitimately use these exemptions for environmentally beneficial actions to avoid a comprehensive CEQA analysis.

The Regional Board's attempt to fit this program into a class exemption is further undermined by the fact that this project likely would have significant environmental impacts. No class exemption can be used "for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances," as is the case here where the Framework allows for a pollution trading scheme that is novel in the state and represents a significant deviation from regulation under the NPDES permitting program and issuance of total maximum daily loads ("TMDLs").[10]

The Framework is similarly ineligible for the "waste discharge requirement" exemption from CEQA. The Regional Board is correct in characterizing the Framework as a "waste

---

[5] Cal. Reg'l Water Quality Control Bd. N. Coast Region, Attachment 1 to Res. No. R1-2017-0027, *Water Quality Trading Framework for the Laguna de Santa Rosa Watershed* ("Framework") § 1.2 (June 14, 2017).
[6] Cal Pub Resources Code § 21065.
[7] 14 CCR § 15378(a), (c).
[8] *Environmental Protection Information Center v. California Dept. of Forestry & Fire Protection*, 44 Cal. 4th 459, 503 (Cal. July 17, 2008).
[9] Cal. Reg'l Water Quality Control Bd. N. Coast Region, Res. No. R1-2017-0027, Approving Water Quality Trading Framework for the Laguna de Santa Rosa Watershed Sonoma County 6 (¶ 30) (2017) ("Resolution").
[10] 14 CCR § 15300.2.

discharge requirement," because it "[i]mplements provisions of NPDES permits," but is incorrect in determining that the Framework is "statutorily exempt from CEQA under Water Code § 13389."[11] The Framework is not limited to establishing controls for NPDES permits; it also establishes various requirements for nonpoint sources that seek to generate trading credits. None of these actions are subject to the CEQA exemption for NPDES permits, and as a result, neither is the Framework as a whole.

Finally, although the Regional Board does not rely on 14 CCR § 15061(b)(3) in its 2017 Framework, in its approval of the 2008 Offset Program, on which the 2017 Framework was based, the Board used nearly identical language to justify its failure to conduct a CEQA analysis and supported that justification by citing to 14 CCR § 15061(b)(3).[12] This provision states, "[w]here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA."[13] Here, however, the opposite is true – it can be seen with certainty that the activity will have a significant effect on the environment. Therefore, the Regional Board may no longer rely on this provision to avoid CEQA analysis.

C. The Framework will likely have significant environmental impacts, and these impacts are not too speculative to consider at this stage

The Board asserts that any impacts from the Framework are "too remote and speculative to analyze at this time."[14] While it is true that "[w]here future development is unspecified and uncertain, no purpose can be served by requiring an EIR to engage in sheer speculation as to future environmental consequences," CEQA requires an EIR if there is "substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment.[15] "May" has been interpreted to connote a "reasonable possibility," and courts have determined that this demands a "low threshold requirement for preparation of an EIR."[16] Here, there is substantial evidence before the board that the Framework will likely have significant adverse environmental impacts that are neither too remote nor too speculative to consider at this stage.

---

[11] Resolution at 5, 6 (¶¶ 25, 30)

[12] *Compare*, Cal. Reg'l Water Quality Control Bd. N. Coast Region, Res. No. R1-2008-0061 Approving Santa Rosa Nutrient Offset Program, (2008) at 3 (¶ 10) *with* Resolution at 6 (¶ 30).

[13] 14 CCR 15061(b)(3).

[14] Resolution at 6 (¶ 30).

[15] Cal Pub Resources Code § 21080(d); *Environmental Protection Information Center v. California Dept. of Forestry & Fire Protection*, 44 Cal. 4th 459, 503 (Cal. July 17, 2008) (quoting *Rio Vista Farm Bureau Center v. County of Solano* (1992) 5 Cal.App.4th 351, 370). Even if a full EIR were not required, the Board should still have conducted an initial analysis to support that determination because CEQA requires such an analysis for a project that "may cause either a direct physical change in the environment, or a *reasonably foreseeable* indirect physical change in the environment." Cal Pub Resources Code § 21065 (emphasis added); § 21080.

[16] *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296 (Cal. App. 1st Dist. June 22, 1988) (quoting *No Oil, Inc. v. Los Angeles*, 13 Cal. 3d 68, 83 (Cal. Dec. 10, 1974).

Further, the Board mischaracterizes the test for whether to conduct a CEQA analysis as whether the environmental impacts are too "remote or speculative;" the correct test is merely whether environmental effects are "reasonably foreseeable." The effects of the proposed trading scheme are not only reasonably foreseeable, but can actually be predicted and quantified. There are ongoing trades already being implemented that can be analyzed to determine the existing environmental impacts of those trades, which could then be used to assess the foreseeable environmental effects of a variety of future trades based on the volume or location of the discharge and offset. The Board could conduct a similar analysis of the effectiveness of existing nonpoint source credit generating projects, the accuracy of ongoing third party verification, and other aspects of the trading program.

D. The Regional Board's failure to review the Framework as a whole is contrary to the purpose of CEQA and poor public policy

The Board's consistent failure to conduct a CEQA analysis is contrary to the fundamental purpose of CEQA. By avoiding CEQA analysis, the board is failing to engage in the process of considering feasible alternatives that would more effectively and equitably reduce phosphorus pollution. These alternatives include providing point sources with compliance schedules to aid them in meeting their stringent effluent limitations[17] and establishing a TMDL for the Santa Rosa watershed that would mandate phosphorus reductions from nonpoint sources, such as those that would propose voluntary projects for approval under the Framework.

Even if the Board staff had engaged in a thorough analysis of various routes to minimize the environmental effects of pollution prior to proposing the Framework, the failure to engage in such a process openly and with public input is contrary to the purpose of CEQA. According to the basic purposes of CEQA, the public should be informed about the potential environmental impacts of allowing permittees to exceed their effluent limitations for phosphorous, and should know why the Board is proposing the Framework despite the fact that significant environmental effects are likely to occur.[18]

II. THE PROPOSED TRADING PROGRAM IS ILLEGAL UNDER THE CLEAN WATER ACT

The CWA simply does not allow for water pollution trading as a mechanism for point sources to avoid meeting permit effluent limitations[19] at the point of discharge. The Act's permitting provisions are very clear that each point source of pollution must meet individual permit requirements; there are no allowances in the Act to purchase credits in lieu of compliance. If Congress had intended to authorize such trading, it would have clearly done so as it has in

[17] *See* Cal Pub Resources Code § 21002.
[18] Cal. Code Regs., tit. 14, § 15002.
[19] The use of the word "comply" in the draft Framework is inaccurate – credits purchased by point sources are not use to *comply* with the NPDES permit limit, but to justify *exceeding* the limit.

other statutory schemes. For example, the Clean Air Act specifically allows for some degree of air emissions trading; to the contrary, the CWA contains no similar language and efforts to amend the CWA to allow for trading have never passed. The very fact that legislative proposals to establish authorization for water pollution trading have been introduced[20] underscores the fact that trading is wholly absent from the existing statute and the NPDES permitting scheme.

To the contrary, the CWA established detailed programs to clean up impaired waters, by requiring states to identify impaired waters and issue TMDLs, point source waste load allocations ("WLAs"), and nonpoint source load allocations ("LAs") through a public process. EPA's regulations make clear that the flexibility for "tradeoffs" between point and nonpoint sources only exists in the TMDL process itself; WLAs may only be made less stringent if a TMDL process concurrently assigns more stringent LAs to nonpoint sources.[21] Once WLAs are assigned and incorporated into NPDES permits, dischargers must comply with their own permit limits. The fact that the Board has established expensive and difficult-to-meet "net zero" phosphorus limits for certain facilities, rather than differently allocating loads and mandating reductions from nonpoint sources in the impaired watershed, does not change the fact that the Board lacks authority to authorize trading as an off-ramp from compliance for these same facilities.

Moreover, pollution trading is fundamentally at odds with the CWA because it circumvents the CWA's technology-forcing principles. The primary goal of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters" by eventually eliminating all discharges of pollutants to waters of the United States.[22] The five-year limits on NPDES permit terms and requirements for EPA to periodically review and revise industry-wide effluent limitations further ensure that permits will become more stringent over time, and that point sources will be required to ratchet down their pollution and maintain the best available technology to reduce discharges. By allowing permit-holders who buy credits to exceed their permit limits, as well as by allowing permit holders who sell credits to surpass their permit's requirements without triggering more stringent permit limits, trading creates a disincentive to the technological innovation underlying the statute's goal of continually reducing point source pollution.

The Framework is also illegal because it allows for trading to meet technology-based effluent limits ("TBELs"), in addition to water quality-based effluent limits. Credit purchasers may use credits in lieu of meeting "specific effluent limitations" as authorized in the NPDES permit.[23] This impermissibly leaves the door open to allow trading to meet any phosphorus limit

[20] *See, e.g.*, Chesapeake Bay Program Reauthorization and Improvement Act of 2012, H.R. 4153, 112th Cong. § 2(e) (2012).

[21] 40 C.F.R. § 130.2(i) (defining "Total maximum daily load" and stating "If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.").

[22] 33 U.S.C. § 1251.

[23] Framework § 3.1.1.

in a permit, including TBELs. EPA and courts have explained that TBELs "constitute a minimum floor of controls that must be included in a permit, irrespective of the discharger's effect on the quality of the receiving water."[24] Because TBELs are the minimum pollution controls an individual discharger is subject to, EPA has made clear that industrial dischargers may not trade to meet technology-based permit requirements.[25] While the Board may intend to only authorize permittees to use trading to meet water quality-based limits through restrictions in individual NPDES permits, the Framework itself leaves the Board discretion to allow trading for any permit limit. This failure to prohibit illegal trades renders the Framework unlawful, as well as inconsistent with EPA's guidance on pollution trading.

III. THE PROPOSED TRADING PROGRAM WILL FAIL TO PROTECT OR IMPROVE WATER QUALITY

The Framework suffers from various additional flaws that will render it ineffective at addressing the watershed's phosphorus impairment, and which are in fact likely to worsen water quality, transparency, and accountability.

A. Alleged nonpoint source reductions are not verified through required monitoring programs.

The Framework authorizes credit generators to quantify pollution reduction credits using "models (mechanistic or empirical), pre-established pollution reduction rates (from experimentation or scientific literature), direct monitoring, or a combination of the above."[26] This violates the CWA, which requires that NPDES permits contain conditions to "assure compliance" with NPDES permit effluent limitations, water quality standards, and other requirements of the Act.[27] The federal CWA regulations further specify that "each NPDES permit shall include" monitoring requirements "[t]o assure compliance with permit limitations," including "[t]he mass (or other measurement specified in the permit) for each pollutant limited in the permit; [t]he volume of effluent discharged from each outfall; or [o]ther measurements as appropriate."[28]

---

[24] James A. Hanlon, Director, EPA Office of Wastewater Management, *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants*, Attachment A 1-2 (Jun. 7, 2010) at 1, citing *Am. Petroleum Inst. v. EPA*, 661 F.2d 340, 344 (5th Cir. 1981).

[25] U.S. EPA, Office of Water, Water Quality Trading Policy Sec. III.E.4. (Jan. 13, 2003).

[26] Framework § 4.

[27] 33 U.S.C. § 1342.

[28] 40 C.F.R. § 122.44(i). Section 308 of the CWA provides additional authority for water quality monitoring in NPDES permits, stating that "whenever [it is] required to carry out the objective" of the CWA, a permitting agency "(A) shall require the owner or operator of any point source to . . . (iii) install, use, and maintain such monitoring equipment or methods . . . as may reasonably be require[d]." 33 U.S.C. § 1318(a)(1)(A)(iii).

All NPDES permits must therefore require site-specific water quality monitoring designed to assure compliance with permit limits. The permitting requirements must specify the "type, intervals, and frequency [of sampling] sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring."[29] Additionally, permits must specify "[r]equirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods."[30] Permittees must report monitoring results "on a frequency dependent on the nature and effect of the discharge, but in no case less than once a year."[31] There are no general exceptions from this monitoring requirement, and as trading is not mentioned anywhere in the Act as an alternative to meeting permit limits at the point of discharge, there is no exception for credits generated by third parties and applied to "comply" with permit limits.

The entire notion of using modeling or numbers from controlled studies in lieu of monitoring for purposes of compliance also contradicts empirical evidence. EPA has established industry-based effluent guidelines based on what existing technology should achieve in practice; often, however, the real world does not conform to what models or estimates predict should or could happen under ideal circumstances. Even wastewater treatment plant technology, which results in incredibly predictable pollution reductions as compared with agricultural best management practices, does not lead to universal compliance. For example, EPA's Enforcement and Compliance History Online (ECHO) database shows that the Town of Windsor, one of the plants authorized by the Board to engage in pollution trading, has experienced numerous exceedances of effluent limits in recent years.[32] Point sources using proven technology often nonetheless exceed discharge limits, and as a result, water quality monitoring to ensure compliance is essential to the integrity of the NPDES permitting program. Accurately monitoring nonpoint source practices' reductions in pollution runoff may be difficult, but this is an argument against allowing nonpoint sources to trade pollution credits, not an argument for allowing these entities to rely on modeling.

B. The use of third-party "verifiers" makes the pollution trading program highly unreliable.

The Framework proposes to rely on third-party verifiers to document the implementation of credit generating practices.[33] This amounts to an abdication of the Board's responsibility to conduct enforcement and compliance oversight, and removes much of the program from meaningful public scrutiny. Allowing independent third-party verifiers to take on this regulatory role opens up the trading program to the potential for significant inconsistency. It also creates an incentive for credit verifiers to promote trading and document its success, which will undermine

[29] 40 C.F.R. §§ 122.48(b), 122.44(i)(1).
[30] *Id*. § 122.48.
[31] *Id*. § 122.44(i)(2).
[32] EPA, Enforcement and Compliance History Online, Detailed Facility Report: Town of Windsor Wastewater Treatment Plant, https://echo.epa.gov/detailed-facility-report?fid=110000523256.
[33] Framework § 8.2.

trust in the program and its integrity, as well as potentially undermining the accuracy of verification practices.

Also troubling, the Framework states that "verification pertains to the project 'as-built,' which may differ somewhat from the Credit Project Plan as originally approved."[34] This approved plan will have gone through public comment and Board review, and should be treated as a fixed, mandatory project, just as binding as a NPDES permit. Any deviations between the approved plan and the as-built project that are observed by verifiers should be deemed unauthorized and subjected to additional review.

The Framework is also extremely vague in describing how rigorous ongoing verification activities will need to be. It does not establish minimum verification frequencies or reporting requirements, stating these "will vary" project-to-project.[35] This makes it practically impossible for the public to assess whether the Framework will result in adequate ongoing oversight of practices that require ongoing maintenance. Regardless, no amount of verification that practices are installed or paperwork requirements can make up for the lack of pollution monitoring requirements to document whether pollution reductions are actually taking place.

C. Point sources should never be able to generate water pollution credits.

The Framework allows point sources to generate, as well as purchase, pollution credits.[36] Allowing point sources to generate and sell credits undermines the CWA's technology-forcing principles and its goals of strengthening permits and continually reducing pollution over time. Point sources are required to use the best available technology to reduce their discharges, and their permits should reflect that by imposing the most stringent effluent limits that the industry's technology can achieve, or the most stringent limits required to maintain water quality standards. If a point source is discharging less than the allowed amount or concentration of a pollutant, this indicates that the permitting authority must strengthen the permit limits accordingly, rather than allowing the discharger to continue complying with lax, outdated standards and profiting from the difference.

D. Credits should never be able to be used in a different compliance period than the one in which they were generated

The Framework proposes to allow "banking" of credits for up to three years, meaning a point source could purchase and use credits to continue its phosphorus discharges even if the claimed reductions took place years prior.[37] This practice will lead to pollution spikes and hot spots that the Framework purports to prohibit: "actions taken to generate credits under this

[34] Framework § 8.2.
[35] Framework § 8.3.
[36] Framework § 2.2, 3.1.2.
[37] Framework § 6.3.

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*."[38]

This sort of banking is also irreconcilable with the very concept of NPDES permit effluent limits for specific compliance periods. If a permittee has a monthly or annual limit, and the pollution reductions are generated outside of that compliance period, the NPDES program does not authorize those earlier reductions to count towards meeting a future limit. To the contrary, this would be an exceedance of an effluent limit and a permit violation. The Board lacks authority to allow credit banking and essentially strip the temporal requirements from existing permit effluent limits.

E. The Framework lacks meaningful baseline requirements for credit generators

The Framework allows nonpoint sources that have adopted essentially no best management practices to sell credits, using current practices, regardless how polluting, as the baseline.[39] This approach will not improve water quality or establish a fair, accountable cleanup plan for the watershed. Instead, it rewards those sources that are currently using the least beneficial practices to reduce phosphorus, as these sources will have the most opportunity to reduce loadings through low-cost practices that should already be required. Nonpoint sources generating credits should be required to meet a consistent baseline, which should require adoption of best management practices and a demonstration of their efficacy through water quality monitoring. The proposed status quo baseline is bad public policy that will not improve water quality.

In addition, regulated sources should not be allowed to generate credits from simply complying with a compliance schedule earlier than required. The very point of a compliance schedule is that a facility is out of compliance with existing requirements; simply beginning to comply with the law is not grounds to award a point source with sellable credits.

Finally, credits for practices that become baseline requirements should not be grandfathered for the entire project life. The Framework does not even define or put a limit on project life,[40] meaning that credits based on practices that become mandatory could persist indefinitely. This will slow water quality progress and create an incentive to seek approval for unreasonably long-term projects that will generate credits for standard, but voluntary, practices. The Board's priority should be establishing nonpoint source requirements to reduce phosphorus discharges, rather than implementing a voluntary trading scheme.

F. The Framework lacks any baseline requirements for credit purchasers

The Framework's eligibility criteria for credit purchasers are even weaker than for credit generators. In fact, there are *no* eligibility requirements for these facilities other than having

[38] Framework § 3.2.1 (emphasis added).
[39] Framework § 3.2.2.
[40] Framework § 6.2.

trading allowed in the terms of the permit itself.[41] Common sense baseline requirements must at a minimum include complete NPDES permit compliance with all other permit limits and terms. As noted above, the Town of Windsor, one of the two point sources the Board has already authorized to purchase trading credits in their NPDES permits, has a recent history of noncompliance with various effluent limitations. The lack of eligibility criteria for participating in the Framework's trading program further undermines any assertions that the trading program will have positive outcomes for water quality.

G. Trading across the entire proposed trading area will fail to prevent hotspots of pollution and is contrary to EPA's guidance

The Framework proposes allowing trading between point and nonpoint sources across the entire Laguna de Santa Rosa watershed, which includes the Laguna, Santa Rosa Creek, and Mark West Creek.[42] Allowing trading to occur across these separate waterways directly contradicts the Framework's stated prohibition on trades that will lead to hotspots or other localized adverse impacts.[43] It is also out of step with EPA's guidance, which states that to avoid hotspots, trades should only occur within "the same water body or stream segment."[44] Even assuming perfect implementation, any trades that do not involve credits generated directly upstream of the credit purchaser threaten to create pollution hotspots. Here, the proposed scheme threatens water quality in entire streams that could be subject to increased point source pollution that is supposedly offset by reductions made elsewhere in the trading area. This presents an unacceptable risk to local water quality.

H. The Framework should not allow double-dipping with public conservation funding

The Framework effectively allows for public subsidization of private credit generating projects, by allowing credit generators to use conservation funding or other grants to pay for projects, and then sell the credits for profit.[45] The only restrictions imposed on this double-dipping are those imposed by the funding entity itself on the use of the funding. This compounds the problem of lax baseline requirements in the Framework; nonpoint sources can not only profit off of practices that should already be required, but can profit off of practices implemented with public financing.

I. The Framework's credit stacking provision lacks scientific merit

The Framework states that credit "stacking" will be allowed, such that projects may be able to generate multiply types of credits. It goes on to require that the credits be used "proportionally."[46] This concept is explained in an extremely cursory way, and is not defined.

[41] Framework § 3.1.1.
[42] Framework § 2.3.
[43] Framework Guiding Principles; § 3.2.1.
[44] EPA, Water Quality Trading Policy at 4.
[45] Framework § 3.2.6.
[46] Framework § 3.2.7.

The Framework does not even describe all of the possible types of credits contemplated. This type of complex multi-market credit generation needs to be analyzed and explained much more thoroughly and transparently before any such practices are approved.

J. Trading ratios will not address the uncertainties and deficiencies in the Framework

The use of trading ratios for uncertainty and retirement cannot adequately mitigate the many deficiencies and problems in the proposed Framework. The Framework proposes a maximum 2.5:1 trading ratio, allowing for a smaller ratio in certain circumstances, such as where the generator actually monitors of pollutant reductions. The Framework asserts that "a factor of 2.0 accounts for all potential sources of variability and uncertainty,"[47] without providing any analysis or justification for this claim. Agricultural practices lead to extremely variable pollution reductions, and a 2.5:1 ratio falls far short of accounting for the inherent uncertainty in the proposed Framework. There should not be provisions for allowing an even lower ratio in any circumstances.

IV. CONCLUSION

Water pollution trading will not solve the Laguna de Santa Rosa's phosphorus problem, and will very likely make this and other water pollution problems worse. The proposed Framework warrants CEQA review, lacks accountability, would introduce significant uncertainty about what pollution reductions are actually taking place, and, most importantly, is contrary to the CWA's requirements for NPDES permits. We urge the Board to reject the proposed Framework and focus on imposing enforceable and transparent pollution reduction requirements on all sources of phosphorus in the watershed.

Sincerely,

Tarah Heinzen
Staff Attorney
Food & Water Watch
1028 SE Water Ave., Suite 245
Portland, OR 97214
(202) 683-2457
theinzen@fwwatch.org

[47] Framework Table 5.1.

July 21, 2017

Mr. David Kuszmar, PE
Watershed Protection Division, TMDL Unit
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A,
Santa Rosa, CA 95403

Dear Mr. Kuszmar,
Russian Riverkeeper ("RRK") is one of twelve Waterkeeper organizations within the California Coastkeeper Alliance ("CCKA") network. RRK works tirelessly to protect and enhance the 1484 square mile Russian River Watershed for the benefit of its inhabitants, its visitors and our ecosystems. On behalf of RRK, we appreciate the opportunity to provide comments on **"Attachment 1 to Resolution No. R1-2017-0027, Water Quality Trading Framework for the Laguna de Santa Rosa Watershed, Public Review Draft, June 14, 2017**" (Framework).

In its current form we do NOT support the draft Framework without the recommended changes in our letter that address our concerns and help improve the Framework in meeting the goals of sound science, accountability, transparency and accessibility.

Laguna Pollution Trading Framework

GUIDING PRINCIPLES

1. Activities conducted pursuant to this WQT Framework must be supported by **sound science** and effectively accomplish regulatory and environmental goals.

2. WQT activities must provide sufficient **accountability**, **transparency**, **accessibility**, and opportunities for public involvement to ensure that promised water quality improvements are delivered.

3. The benefits of WQT must be realized without allowing water quality impacts associated with credit-generating actions to occur in place, in kind, or in time.

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

RUSSIAN RIVERKEEPER

GENERAL COMMENTS

In order to meet the mandates and requirements of the Clean Water Act and meet the Guiding Principles of the Framework we offer the following suggested changes to the Framework. Our detailed comments following these suggestions provide the background on why these changes are needed.

1. Let's call this program what it is, we are trading Phosphorus, an impairing pollutant in the Laguna de Santa Rosa, so we're not trading water quality but pollution, pollutants or Phosphorus in the draft Framework. In order to be transparent, the Program should be re-named to Pollution or Phosphorus Trading Program Framework so no one is mislead regarding the real nature of what is being traded.

2. Currently only the two point source dischargers the City of Santa Rosa and the Town of Windsor would be able to use the draft Framework, prior to any new discharger or Permittee enrollments in this program we want to see the adopted Framework re-opened concurrently with the required permit updates for any new enrollees in a public hearing process as new categories of dischargers would be enrolled, such as non-point municipal dischargers, which creates new issues as pollutant loads are far more difficult to measure or quantify and whether it would be allowable for those dischargers to conduct projects within their own permit boundaries.

3. We want the Framework to incorporate a "local advisory group" with a diverse membership including citizens, local water advocates, scientists, engineers and academia that is independent of parties associated with implementing the draft Framework similar to the State of Washington's program to provide input on pre-qualification of eligible trading practices OR a full public hearing process to fully vet any practices proposed for pre-qualification.

4. We do not support ANY trading activity with unregulated non-point sources, either generators or sellers, who discharge Phosphorous and have no baseline requirements. Any eligible party or credit generation MUST be meeting current EPA Water Quality Standards for Phosphorous for Freshwater bodies in Aggregate Ecoregion III of 0.022mg/L to comply with North Coast Basin Plan requirements.

5. Prior to any trading commencing with parties other than the City of Santa Rosa and Town of Windsor's POTW's, we expect that TMDL's are developed for any new parties like all other trading programs on the West Coast.

6. We expect that when new, pre-qualified practices are approved that site specific pre and post project water quality monitoring be conducted during rain events (when pollutants are discharged) to ensure the accuracy of computer models in order to determine credit quantification amounts generated from actual measured reductions in Phosphorous and that these actually meet estimates provided in the pre-qualified practices process. Once confidence is established, to the satisfaction of the local advisory group mentioned above, then computer modeling could be used to determine credit generation based on the actual modeling data. Anything less does not meet the strict monitoring and reporting requirements of Point Source NPDES permits, nor does it address the high level of uncertainty with certain trading practices.

RUSSIAN RIVERKEEPER

7. We strongly support this program providing funds to large long –term restoration projects that either reduce legacy phosphorous in the Laguna or improve the Laguna's ability to process and sequester nutrients in vegetation such as riparian trees. These projects have a long project life and can generate credits for many years providing a stable credit mechanism to assist Windsor and Santa Rosa in meeting permit limits. In order to encourage such projects we support a more favorable credit-banking scenario than three years for any such restoration projects such as five years due to associated long-term benefits to nutrient reduction, but we don't support credit banking in perpetuity. In addition, any credit generating practices that provide only an annual benefit should not be allowed to bank beyond one year since those practices do not produce an enduring benefit.

8. Lastly, we expect that the Water Pollution Trading program credit certification, registration and tracking information as well as all associated documents related to pollution reduction activities to achieve baseline requirements for Phosphorous (i.e. Farm Plans, Nutrient Management Plans, etc.) be available to the public via a website to be equivalent to public disclosure requirements for all NPDES point source permittees including all verification data and site specific monitoring and all data associated with any computer modeling along with all raw data and assumptions.

DETAILED COMMENTS

1.3 Public Involvement

NPDES permit renewals or re-opened permits:

Please list in this Framework AND on a web page as well as send this information out via listserve so as to inform the public of the dates of ANY and ALL NPDES Permit Renewals or permits that are scheduled to be reopened where pollutant credit trading will be authorized for use as a means of compliance with effluent limits. We expect at least a 30 day comment period, a written response from staff and a public hearing prior to the approval of ANY permits where pollutant credit trading will be involved. In addition, the Framework should be re-opened when any new credit buyers request to be added to the program in a public process, ideally one that parallels the permit renewal or re-opener public processes.

Accessibility of Credit Generation Projects: In line with Guiding Principles 1, 2, and 3 please add to the framework that in order to be considered for approval of any credit generating practices, those supplying credits must be willing to allow the public access to places and practices where phosphorus credits are to be generated. As with publicly owned treatment works (POTW) where the public can arrange for a visit to see how their rate payer dollars are spent, the same principle should apply here. In fact, the Regional Board should require it with reasonable notice. Not only should any and all documents associated with a credit generating practice be publically available, the practice itself should be (upon request) available for public verification.

Recommendation for Public Advisory Group for Oversight

Under the State of Washington's "Water Quality Trading/Offset Framework" and in an attempt to avoid criticism for program implementation being a "top down" or opaque process, decision-making regarding pre-qualification of eligible trades and other substantive changes to the program relies upon input from a

(1.3 Public Involvement, cont.)
"local implementation advisory committee". RRK would welcome a committee such as this where a diverse group of citizens, scientists, engineers, professionals, and academia representatives would give input on pre-qualification of eligible trades before they go out for public notice and comments thus establishing a "bottom up" process.

Provide estimates of the number of pounds each buyer needs to purchase in public documents
We are still unclear as to how many pounds of Phosphorus both the City of Santa Rosa and the Town of Windsor will be required to offset every year under this trading program. We understand this number is variable and depends upon several factors, but please provide the public with an estimation based upon the last five to ten years of annual NPDES reporting data as well as the POTW's future projection rates over the next five to ten years. We recommend staff creates an easy to read table (or ledger) that specifically enumerates what the loading has been and is expected to be in the future for SR and Windsor POTWs within the publically available program documents. As credit-generating projects are approved, please include these practices, as well as the credits they are expected to generate, on this table. Also provide any other phosphorus loading information you have from any other sources and what estimation or monitoring data you used to arrive at these figures. Please include this information/loading amounts in the framework and/or the Resolution (No. R1-2017-0027, Page 2, Numbers 6 & 7) so the public can be made aware of just how may pounds of phosphorus will be considered to be offset under trading.

1.4 Regional Water Board Authority to Audit
As this will be the first phosphorus pollutant trading program on the west coast, please include a third party independent auditor in addition to your own staff that would have the ability to audit and inspect ANY/ALL activities conducted under the terms of framework – separate from the paid verifier to remove any profit motive. In fact, we would think it prudent and in the publics' best interest as this would assist in attainment of Guiding Principle #2, similar to hiring Tetra Tech to conduct compliance inspections at local MS4 facilities that provided very useful impartial data on compliance. We are recommending that you include in the framework that after a period of (x) amount of credits traded or (x) amount of years (whichever occurs first) that you will allow that a third party audit be conducted and that the findings from such audit will be released to the public. Periodic audits will not significantly increase costs and would provide a valuable science based feedback loop to improve the program, unlike reliance upon computer models.

2.1 Types of Trades
Please re-write the statement "This Framework allows trading of pollutant credits" to "This Framework allows trading of Phosphorus credits" as that is the only pollutant to be traded currently. If, and when, any other pollutant is considered for trading, we would expect that this framework will then be re-circulated and the same public participation elements be made available.
NOTE: We thank you for acknowledging up to this point in the draft framework that what is being traded are "Pollutant" credits. We appreciate the way that is stated as it is honest - unlike the title of this program because we are not trading water quality we are trading *pollutants or pollution* – call it what it is, pollution trading, in order to be transparent and stick to your guiding principles without this green-wash marketing spin!

RUSSIAN RIVERKEEPER

2.2 Trading Parties

The first trading partners option you advance and support is between a measurable point source discharge [NPDES permittees (credit buyers)] and UNREGULATED NON-POINT SOURCES [credit generators or sellers]. In doing so, you are giving preferential treatment to polluters who are yet to be under a permit program and at the same time do not have a phosphorus load allocated to them (TMDL). Listed below are our concerns and recommendations related to PS and NPS trading. **We strongly oppose any trading with unregulated parties.** In addition we oppose any trades with entities that are not meeting the EPA Water Quality Standards of 0.022mg/l total P or have current water quality violations or pending enforcement actions. All trading parties must be in current compliance with the Clean Water Act to be eligible to generate credits, if not the enforcement unit should address the issues first.

1) RRK believes the framework falls short of meeting the legal requirements of the Federal Water Pollution Control Act, 33 U.S.C. §§1251 et seq. ("Clean Water Act" or "CWA") in numerous ways and does not provide reasonable assurances that the water quality standards for pollutants will be met [see 33 U.S.C. § 303(d)(1)(C); 40 C.F.R. § 130.7(c)(1)(i).] The Clean Water Act is silent on the issue of phosphorus/nutrient trading as a means to meet National Pollutant Discharge Elimination System ("NPDES") permit limits. As the CWA is currently written, point sources enrolled in NPDES permits are highly accountable for their discharges and permit compliance is easily verifiable via online monitoring and reporting data (MRP) and are enforceable. This pollution trading framework will allow this transparent, accountable system to be replaced with one that makes it extremely difficult for anyone to properly track point source compliance. The public needs assurances that the credits that the POTWs rely upon will be the product of measurable decreases in phosphorus loads from credit-generating sources. Given that the Laguna is highly impaired with 8 different 303(d) listed pollutants, we ask that if you are to go forward with such a trading program that you write into the framework a "public accessibility" clause that would allow the public access to any and all sites where credits are being generated (upon request and agreement from the credit generator) as well as have access to a data base (example=SMARTS) where any and all documents associated with the credit generating, purchasing, or selling is available. This will allow the public to gain confidence and be assured that the program is fulfilling the guiding principles you have developed it under.

2) TMDL development should be required before trading commences. All water quality trading frameworks on the West Coast and the majority of trading programs across the country address trading in the context of achieving compliance with TMDL wasteload allocations (measurable PS loads). The reason: "without the 'cap' on the amount of a pollutant that a water body can receive and the assignment of responsibility for that pollutant in the form of wasteload and load allocations that are provided by a TMDL, it is extremely difficult to know exactly what actions or what quantity of those actions would achieve compliance with water quality standards. (Washington State Department of Ecology, April 2011 http://www.ecy.wa.gov/biblio/1110027.html). According to Oregon Department of Environmental Quality, trading for a pollutant parameter in a watershed in which a TMDL is required but has not yet been established may be challenging because it may be difficult to determine the total allowable loading of a pollutant to a receiving water body without the analysis inherent in the TMDL. In

(2.2 Trading Partners, cont.)

pushing ahead on Pollution trading prior to a TMDL (the City's have effective TMDL's in their zero limits) would be analogous to starting a business with no budget, you have no idea what your annual expenses would be (nutrient reductions in this case). Your business, in order to succeed and show a profit, (nutrient reductions) would not rely upon blindly swinging hoping you get it right – that is not sound science. Sound science – if our goal is to regain beneficial uses – would require we know how to get to the finish line or how much do we need to reduce loads to get the lost uses back? Additionally, if you want to have trading activity on both sides (buyers and generators) you need a driver in the form of a TMDL to get everyone regulated under a baseline. In assigning loads, this in itself will drive a high amount of trading activity and at the same time you're getting all dischargers working on load reductions. This is the sound science based way to getting to a healthy Laguna. As currently written, the framework assigns loads to only two out of thousands of dischargers. In bringing other phosphorus dischargers into a trading program before they have baseline load reduction targets, basically ensures we are paying people who are NOT currently complying with FED EPA phosphorus criteria. Regulations alone might not solve the problem but our current lack of regulation of hundreds of sources of phosphorus will ensure we never recover beneficial uses so until everyone has loads only the two cities should be allowed to use this Framework.

In evaluating a proposal for trading a Section 303(d) listed parameter pre-TMDL (in this case Phosphorus), NCRWQCB should be required to perform an analysis (such as a cumulative effects analysis) of current pollutant loadings that establishes a target or loading cap at or below current conditions that represents progress in the attainment of water quality standards (www.oregon.gov/deq/Filtered%20Library/WQTradingIMD.pdf). Such an analysis and any resulting target or loading cap should be subject to a public notice and review process.

When we have asked for specific examples of where trading has been in place and Water Quality Standards are measurably improving we were told to look at the Rogue River, Oregon (under a Temperature TMDL) and Lake Tahoe (under a sediment TMDL). Both of these programs have not produced any receiving water improvements and will take DECADES to produce enough data to show that WQS are improving as a result of their programs offset activities. On Lake Tahoe, it could be 50 years or more (EOSR item 3, Robert Larsen, May 18th, 2017). Again, neither program occurs outside of a TMDL nor are they programs where the only thing traded is Total Phosphorus on a mass basis.

Acceptable Requirements for Trading with Unregulated Dischargers of Phosphorus

While we remain apprehensive and skeptical of most all trades that would occur between point sources and unregulated non-point sources we would be open to one condition where it may be acceptable—this would be where (a) there would be a baseline that would have to be met in order for a trade to occur. This baseline must be derived via pre –project water quality monitoring specifically for Total Phosphorus that is conducted during wet weather runoff conditions (at the very least Federal EPA Criteria based on Aggregate Ecoregion III [0.022mg/L] for Total Phosphorus would have to be met in order to be pre-qualified as a credit generating practice). (b) Before the credit generation occurs and is registered as complete, post-project

(Acceptable Requirements for Trading with Unregulated Dischargers of Phosphorus, cont.)

water quality monitoring (specifically for Total Phosphorus) in wet weather runoff conditions should confirm and verify that credits were actually generated (NOT ESTIMATED) and the project accomplished an improvement in water quality (i.e. "ensure that promised water quality improvements are delivered" [guiding principle 2]).

2.3 Trading Area

All efforts should be made to improve and preserve water quality upstream of where the loading of the POTWs is occurring. RRK stands by the principle that when we improve tributary waterways directly upstream of the Laguna, the Laguna's health will improve. Under a past "nutrient offset project" the loading was happening at the Delta Ponds in the Laguna and the offset was occurring on Mark West Creek, thus a large segment of waterway was degraded between the POTW and where the offset occurred. The simple laws of science dictate that all reductions of phosphorus should be made upstream of existing loads requiring credits. Currently, you list the entire Laguna de Santa Rosa as the "Trading Area". The benefit of an "upstream reduction" policy is that it will promote restoration of smaller impaired waterways. Forested or reforested small waterways are responsible for large amounts of nutrient reductions (Stroud Water Research Center, 2009) when they have numerous layers of riparian trees proliferating away from the channel. If you are going to approve credit-generating practices downstream of the POTWs, we strongly advise that only large, multi-benefit, "green infrastructure" credit generating projects be considered that can measurably take up significant amounts of Phosphorus.

2.4 Pollutants to be traded

"The framework supports trading of WQ credits for one pollutant only, total phosphorus, on a mass basis". The impaired condition in the Laguna de Santa Rosa relates to biostimulatory substances yet not all forms of Phosphorus are biostimulatory. We think in the interests of sound science that we need to focus on reactive, dissolved Phosphorus rather than just Total P if that is the fraction that drives the plant growth, low DO issues in Laguna. That said, sound science would dictate that we focus control efforts on the forms of phosphorus that stimulate plant growth as opposed to Total P. Some discharge sources like Sediment laden runoff has higher fractions of un-dissolved phosphorus while the treatment plants might have higher fractions of dissolved Phosphorus so we are not trading equivalent pollutants if one produces a higher biostimulatory effect.

Laguna tributaries are each unique, each type of effluent or runoff to be traded has different biostimulatory characteristics and responses. RRK implores staff that the differences in the waterbodies and the phosphorus loading constituents must be studied and evaluated beyond our current understanding before even considering such a trading program, especially in a pre-TMDL environment. If Total Phosphorus on a mass basis is to be traded, we highly recommend that bioavailability studies be conducted within the Laguna. Have the levels of soluble reactive phosphorus (SRP) and orthophosphate been evaluated from either of the 2 POTWs? With the rampant Ludwigia problem, we strongly recommend that SRP and orthophosphate be monitored and evaluated throughout the entire Laguna before engaging in this trading program. To date little or no data exists.

RUSSIAN RIVERKEEPER

2.5.1 Supporting Documentation for Pre-Qualified Practices

RRK is completely opposed to any practice where supporting documentation relies upon "predictability" factors. To begin with, we hear directly from almost all farmers we talk to that their nutrient management plans are proprietary secrets and we know from a few ag producers that will show their plans that applications of nutrients are highly variable from farm to farm. So when computer models are employed they tend to use one consistent value and smooth out the real world variability. Then there is human error and human nature that my college statistics professor mentioned every time we studied models that introduces bias into every model in existence. Under-reporting nutrient use, not measuring nutrient use or not being truthful for various reasons results in flawed models with flawed output.

In our review of models used in existing programs or the Nutrient Offset Program or Nutrient Tracking Tool we find a lot of flawed assumptions, inaccurate data and numerous biases built into the models. Waterboard staff presented Phosphorus loading calculations for the City of Santa Rosa that relied upon the "2006 USDA Cropland Data Layer" This California data layer was not supported by ANY Metadata thus it lacked scientific credibility as you can see in the link below (https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php).
Staff reliance on the "L-THIA Model" used in the "Analysis of Potential Credit Supply" was not ground truthed for this watershed, and uses broadly assumed data see this link below (https://engineering.purdue.edu/mapserve/LTHIA7/lthianew/lidIntro.php.
In addition, we have reviewed the Oregon Nutrient tracking Tool and similar place based tools and find that in their own literature they cite numerous assumptions that input data is based on, how there is averaging in several steps and do not cite any error rate, possibly because they have exactly one site specific data set to calibrate to. A real world example of the failure of modeling is the article in the July/August 2015 issue of Stormwater Magazine entitled "Writing the Menu for the Chesapeake Bay "Pollution Diet"", by Barbara Hasselgrave. In a section of her article titled "Computer Modeling Predictions- Still Not Real Life", she writes how the TMDL models for 2014 showed a 18% decrease in Phosphorous, when actual USGS Water Quality Data on the Eastern Shore showed that Phosphorus levels actually increased! The USGS and others attribute that to the high rate of historic nutrient loading in soils, which models obviously did not account for. That is exactly why we will not support this Framework without a requirement for pre and post project monitoring to determine actual reductions in phosphorus and to help calibrate future models once an adequate data set is captured and variability in the real world can be accounted for.

To relying upon computer modeling only is not sound science. As citizen water quality monitors we are held to far more rigorous data quality standards than the Frameworks proposed un-regulated phosphorus pollution trading parties are. How is it, volunteer data collection is held to a far higher standard? Currently, the Santa Rosa and Windsor treatment plants are not allowed to model water quality for discharge monitoring and reporting so replacing very accurate end of pipe measurements for NPDES facilities with modeling might be considered backsliding as it is certainly not an equivalent in the data quality that would be produced.

(2.5.1 Supporting Documentation for Pre-Qualified Practices, cont.)

In addition, real world nutrient discharges are not as neatly predictable as computer models imply. If the computer models were reasonably accurate, then why hasn't one study to date been able to correlate modeling output to measurable improvements in receiving water quality where trading currently takes place as mentioned above? A good example of this reality is the article from Stormwater magazine mentioned above. RRK must advocate for "measurable" and "proven" effectiveness over "predicted" practice effectiveness. Again, we do not expect on-site monitoring to continue forever, but long enough to establish confidence and adequate data sets to provide accurate, locally derived data that reflects local conditions to properly calibrate future models for approving pre-qualified practices and credit verification. Also, it would seem that staff is fully aware of the "credit quantification methods" that will be relied upon and who developed these "methods" and yet Staff has chosen to avoid sharing any of this in the Framework. Please include in the framework, examples of credit quantification methods (i.e. Willamette Partnership, Freshwater Trust, etc.) that you are already aware of so that we may make informed decisions regarding the validity of these methods and whether they are based upon "predicted practice effectiveness" or are supported by "site specific analysis". We implore you to share verifiable science. To be silent on this matter, contradicts the guiding principles of the framework of transparency and accessibility.

In studying other pollutant trading programs, we have found there is an extremely high level of uncertainty inherent in Agricultural NPS pollutant management [Pollution types, structural component of the Ag practice, the physical environment, the choice of BMPs and how, when and where they are implemented] add to this the fact that this framework is designed to manage "predicted" phosphorus loading (Sect. 2.5.1 pg. 6-7) on the part of the credit generators. Releases of WWTP effluent occur daily at a relatively constant rate, however, as mentioned above there is huge uncertainty in "predicted" (NOT ACTUAL) non-point source reduction practices when you just consider the seasonal and annual variability in precipitation (Climate Change, Atmospheric Rivers, ARkStorm). For these reasons, we expect that any trading program be just one of many alternatives in a comprehensive, enforceable, and scientifically based "plan" for pollution elimination. Ultimately, one that will assure an increase in assimilative capacity within the Laguna de Santa Rosa.

2.5.2 Process for Approving Pre-Qualified Practices

Please consider the "Recommendation" advanced in Section 1.3 comments above and form a committee (a diverse group of citizens, scientists, engineers, professionals, and academia representatives) who could provide input on pre-qualification of eligible trades (Sect. 2.5.2 Step 3: Staff Review and Recommendation, pg. 8) before they go out for public notice and comments. This would ensure efficacy and transparency at the highest level. In addition, field visits to potential sites where the pre-qualified practices will be used should be available to the public or interested parties to meet guiding principles for accessibility and transparency.

3.1.2 Credit Sellers

All credit sellers by nature have to be discharging phosphorus if they have something to trade – right? If that is the case, then until their discharge is measured and monitored to ensure compliance with EPA

(3.1.2 Credit Sellers, cont.)
Criteria for Phosphorus at or below 0.22mg/L of P, any potential sellers over that limit should be prohibited from trading until they are under that limit. Likewise, any reductions below that limit would be eligible for credit generation and sales. In addition, any and all sellers must be in good standing with the Waterboard in terms of complying with any applicable rules, regulations and have no outstanding enforcement issues.

3.2.1 Avoiding Localized Impacts
How can anyone be sure if localized impacts are occurring when we have no idea how phosphorus reductions are going to be measured? RRK asks that you include a process for making sure the "standard methodology" you rely upon is peer reviewed. This would fulfill guiding principles 1, 2, & 3.

3.2.2 Baseline Requirements for Credit-Generating Projects
In Oregon, trading rules require that credits may only be sold above a "trading baseline." Landowners document compliance with applicable requirements in order to enable Oregon Department of Environmental Quality to determine trading baselines. In Washington State, trading does not occur unless a TMDL has been established and all trading partners have a load assigned to them. Using the same baseline and assumptions used to develop a TMDL ensures that credits calculated do not exceed the number of credits actually available. For example, if a TMDL assumed that the total load of a pollutant from a Laguna tributary was two pounds, implementation of pollutant controls for that pollutant in that tributary could not result in more than two pounds of credit, and in fact would have to be less than two pounds because it is usually impossible to remove every bit of a pollutant. Using the TMDL assumptions as the baseline also ensures that everyone has the same starting point for measuring reductions, so all dischargers are treated fairly and equally. Currently, you are giving preferential treatment to non-regulated, NPS phosphorus pollutant sources. This is unfair to the POTWs who must comply with NPDES effluent limits.

"Where no such requirements exist baseline shall be equivalent to current conditions or practices at the project site, based on prior three year history of the property or operation" ??? Please do not show deference to non-regulated NPS phosphorus discharges. There should be requirements for EVERY discharger. The only possibility for "no requirements" or "no baseline" would be where active farming land is taken out of production and put under a conservation easement (i.e. managed retreat scenario where, as an example, a vineyard in a flood plain is taken out of production and a wetland complex is constructed).

And where the **"action takes place ahead of a regulatory compliance schedule"** the credits should be short lived and minimized.

"For projects implementing practices that later become baseline requirements due to the effects of new or expanding regulatory requirements, credits generated by those practices shall be honored for the approved project life", this seems to show preferential treatment to those who are currently polluting without a permit and do not have a load allocated to them. We believe that existing discharges in excess of EPA Nutrient Criteria for our Ecoregion of 0.022mg/L of P are unauthorized and as such should not be eligible for generating credits until they are in compliance with EPA's water quality standards.

RUSSIAN RIVERKEEPER

3.2.5 Timing of Framework Applicability

Please create an appendix to the framework where all projects previously approved under the Santa Rosa Nutrient Offset Program (RWBO No. R1-2008-0061) that will continue to generate credits according to their terms under which those projects were originally approved, are listed, how many credits they are generating and when their terms will expire.

3.2.7 Credit Stacking

Please explain the concept in more detail. What is a "**Wetland Credit"**? What program are these generated under? Please provide some references and where we can find more information on any other credit generating activities considered for "Credit Stacking".

4. Quantifying Pollutant Reductions for Water Quality Credits

RRK recommends that any methods "for quantifying WQ Credits" (unless they rely upon direct monitoring) be peer reviewed and that these reviews are shared with the public and we are allowed to comment on these reviews and methods before they are accepted by staff as being appropriate. Appropriate methods for Quantifying Water Quality Credits may NOT include the use of MODELS. Models sidestep NPDES Enforcement. Models based upon literature review are not equivalent to Laboratory analysis of discharge samples and do not meet mandates for Monitoring and Reporting. To rely upon modeling is counter to guiding principles 1, 2, & 3. We are advocating for verifiable science, where this science reflects actual Laguna de Santa Rosa specific tests. In the second paragraph of Section 4, please remove "In general" and replace the word "should" with "must"**.**

5. Trading Ratios

The use of trading ratios for uncertainty and retirement cannot adequately mitigate the many deficiencies and problems in the proposed Framework. The Framework proposes a maximum 2.5:1 trading ratio, allowing for a smaller ratio in certain circumstances, such as where the generator actually monitors pollutant reductions. The Framework asserts that "a factor of 2.0 accounts for all potential sources of variability and uncertainty," without providing any analysis or justification for this claim. Agricultural practices lead to extremely variable pollution reductions, and a 2.5:1 ratio falls far short of accounting for the inherent uncertainty in the proposed Framework. There should not be provisions for allowing an even lower ratio in any circumstances.

RRK advocates for a default of 3:1 (includes uncertainty and retirement) not 2.5:1. All trades should be required to directly measure their pollutant reductions. Under Table 5.1, Staff advances that "a reduced uncertainty ratio may be applied when a credit-generating project includes direct measurement of pollutant reductions". This should not be offered as something that if provided will get incentivized by lowering the uncertainty ratio of the credit, this should be a mandatory practice and should be a requirement of all credit generating practices.

RUSSIAN RIVERKEEPER

8.0 Project Implementation & Verification—

Please refer to our comments in section 2.5 on pre-qualified practices since they all apply here. Simply put, we expect all project verification to have an initial period where pre and post project discharges are monitored to capture real world data for future model calibration. We also expect that any and all documents related to activities conducted under this Framework or future iterations as well as all documents related to that party's water quality compliance and nutrient management efforts (including farm plan sections on nutrient management and water quality) be public to meet the transparency and accessibility principles and be equivalent with NPDES point source permits. We expect verification sampling to be conducted in moderate to heavy rain events when sediment and pollutants are mobilized to waterways especially for NPS runoff.

8.1 Documenting Pre and Post Project Site Conditions.

We repeat our comments from section 2.5 and 8.0 again here, we expect actual water quality data to accurately portray pre and post project discharge characteristics as well as photo documentation of pre and post project conditions with no initial reliance on computer modeling to document pre and post discharge characteristics.

8.3 Ongoing Project Verification

Credits generated are to be accurately "estimated" using "appropriate quantification methods and procedures" (sect 8.3, pg 17). This completely obfuscates the guiding principles of "the framework". This trading program must not accept "estimations". Require site-specific pollution monitoring by credit generators to demonstrate that claimed pollution reductions are actually taking place. Allowing farms and other nonpoint sources to create credits based on modeling and research estimates of pollution reductions from various practices is incompatible with the CWA basic requirements that all permits contain monitoring provisions to ensure compliance with permit limits.

Where a report identifies a failure to meet approved practice standards or other requirements of an approved "Credit Project Plan". Please insert into the framework that this information will be made available to the public along with the remedies proposed and what action, if any was taken by Staff (suspension or cancellation of credits). This will hedge against non-transparency and will show commitment on your behalf to the guiding principles of the framework.

11.2 Framework Improvements and Modeling

First, remove "modeling" from this section unless you have the model peer reviewed and sent out for comment. "**Ambient WQ monitoring is not required under this framework, rather it is "anticipated" that a Russian River Regional Monitoring program will be conducted (sect 11, pg 20)**. This is statement is too ambiguous, will not provide assurance that trades are actually reducing Phosphorus as claimed, nor provide any meaningful data on how trading is improving WQ standards or protecting Beneficial Uses.

By not relying upon site specific and/or ambient monitoring, this section of the framework is contradictory to your guiding principle "The benefits of WQT must be realized without allowing water quality impacts associated with credit-generating actions to occur in place, in kind, or in time"

CLOSING COMMENTS

In the opinion of Russian Riverkeeper, the ideal mix required to address the Laguna impairment for P/biostimulatory substances is a mix of strong regulatory permits, TMDL's and robust enforcement. Paying un-regulated dischargers of P that are violating EPA's water quality standard of 0.022mg/L for P equates to an enforcement failure not an "eligible trading party". Remaining infeasible load reductions should be addressed via considerations written into the Framework that would fund large scale projects to reduce legacy nutrient cycling and improve the Laguna's ability to process nutrients. Projects such as creating dense layers of streamside riparian vegetation on the channel banks extending over a hundred feet from the channel would greatly improve uptake of P. Other projects that make sense to us are listed below.

Multi-Benefit Projects

Reestablish, Reconnect and Regenerate

- floodplains with the historic channels and tributaries
- Create or restore wetland complexes/large aquifer recharge projects (create relief from flooding)
- Aggressively reestablish riparian forests (provide wildlife habitat/migration corridors)
- Remove legacy phosphorus/sediments
- Create funding mechanisms that will protect land conservation into perpetuity
- Support "General Plan" updates (advocate for "managed retreat" on waterways/increased riparian buffers)

The Russian Riverkeeper thanks you for the opportunity to comment on "Attachment 1 to Resolution No. R1-2017-0027, Water Quality Trading Framework for the Laguna de Santa Rosa Watershed, Public Review Draft, June 14, 2017".

Respectfully,
Bob

Bob Legge
Policy Director
Russian Riverkeeper
PO Box 1335
Healdsburg, CA 95448
707-433-1958
www.russianriverkeeper.org

City of Santa Rosa

July 20, 2017

Matthias St. John, Executive Officer
North Coast Regional Water Quality Control Board
5550 Skylane Blvd, suite A
Santa Rosa, CA 95403

RE: Comment Letter - Laguna WQT Framework/Proposed Resolution No. R1-2017-0027 approving Water Quality Trading Framework for the Laguna de Santa Rosa Watershed

Dear Mr. St. John:

The City of Santa Rosa ("City") submits the following comments on the Regional Water Quality Control Board, North Coast Region's, ("Regional Water Board") proposed Resolution No. R1-2017-0027 ("Resolution"), approving the Water Quality Trading Framework for the Laguna de Santa Rosa Watershed ("Framework") attached as Attachment 1 to the proposed Resolution. The City previously participated in the June 29, 2017 Regional Water Board workshop, held to receive early oral comment on the proposed Resolution and Framework, and appreciates the opportunities Regional Water Board staff have created so as to solicit involvement by stakeholders in the creation of this program.

The City appreciates Regional Water Board staff working with stakeholders in preparation of the proposed Resolution and Framework, an innovative expansion of the initial program that the City has been implementing via the Santa Rosa Nutrient Offset Program described in Regional Water Board Resolution No. R1-2008-0061 ("Nutrient Offset Program"), a copy of which is enclosed as **Attachment A** to these comments. The City remains committed to sound environmental stewardship and to continue our efforts to work collaboratively with the Regional Water Board to preserve and protect water quality in the region. It is in that spirit that the City submits the enclosed comments, which the City believes will promote program flexibility, provide clarity in program implementation, and allow compliance offsets to focus on the most beneficial water quality actions in the greater Laguna de Santa Rosa watershed.

The City's NPDES Permit, Order No. R1-2013-0001, National Pollutant Discharge Elimination System ("NPDES") Permit No. CA0022764 (the "Permit") imposes a "no net loading" requirement, applicable to phosphorus, for the City's limited discharges to the Laguna de Santa Rosa.[1] The "no net loading" requirement, which requires that phosphorus discharged by the City be offset by phosphorus-reducing projects within the greater Laguna de Santa Rosa watershed

[1] *See* Permit at Section IV.2.b.i., page 9.

Santa Rosa Water
69 Stony Circle • Santa Rosa, CA 95401
Tel: (707) 543-4200 • Fax: (707) 543-3936

over three-year compliance periods, was imposed, in part, on the Basin Plan's narrative water quality objective for biostimulatory substances and, in part, on Clean Water Act section 303(d) listings for low dissolved oxygen and phosphorus. While Regional Water Board staff have dedicated time and effort to the preparation of a Total Maximum Daily Load ("TMDL") related to these listings, no TMDL has yet been completed for the watershed.

The City strives to beneficially reuse all of the recycled water produced throughout each year, providing recycled water to agricultural operators for beneficial water reclamation and reuse, for urban reuse, or to the Geysers Recharge Project. Operating our recycled water system to maximize beneficial re-use in the dry season and avoid discharge in the wet season is challenging due to unpredictable weather, which causes inherent variability in annual discharge volume and associated phosphorus offset requirements.

Compliance with the "no net loading" requirement is currently attained via the Nutrient Offset Program, which contains many of the same program elements as the Framework being proposed via the Resolution. Only three projects have been successfully implemented under the Program. As Regional Water Board staff is aware, project identification, approval and implementation, has been and will likely remain a long, arduous process. Considering a range of factors including 1) it will become increasingly more difficult and far more expensive to identify and implement projects not already being addressed in some fashion via a regulatory program, 2) the fact that the City's existing discharges remains approximately 2-4% of the total phosphorus load to the Laguna de Santa Rosa,[2] 3) the circumstance that discharges occur during the wet season when substantial flushing occurs within the watershed, and 4) the City's primary discharge location is at one of the lowest downstream locations of the Laguna de Santa Rosa prior to confluence with the Russian River, the City remains concerned about the technical validity and appropriateness of the "no net loading" provision.[3]

In light of the above, the City plans to continue discussions with Board staff of an alternative watershed restoration-based compliance approach to be developed during the upcoming year as the City prepares for its Permit renewal. Conceptually, this approach would provide greater certainty in the City's investments in the Laguna de Santa Rosa's restoration (e.g., data collection, strategic planning, project implementation, etc.), allow reasonable flexibility in the City's discharge management plan, provide regulatory certainty, and, more substantially and directly, address the water quality challenges in the watershed to allow more timely return of the watershed's ability to support its designated beneficial uses.

---

[2] At the time the City's NPDES Permit was adopted, the City and Regional Water Board staff agreed that the City's relative contribution of phosphorus to the Laguna de Santa Rosa watershed was 1.8%. *See, e.g.,* November 21, 2013, audio transcript ("Hearing Transcript") from Permit adoption hearing, time stamp 57:32-36 and 1:25:55-1:27:04. Since that time and with updated information from the most recent wet seasons, the City's contribution has remained under 4% of the watershed's loading.

[3] A similar "no net loading" requirement was previously voided by the State Water Board, in favor of interim, performance-based limitations. (*See In the Matter of the Review on its Own Motion of the Waste Discharge Requirements for the Avon Refinery*, SWRCB Order No. 2001-06)

Nonetheless, the City fully supports that water quality trading and nutrient offsets can be an important compliance tool pre- and post TMDL. Therefore, the City seeks to secure beneficial changes to the Framework and Resolution to ensure that the proposed program can be a success.

Comments on Resolution:

Findings 6-14, pages 2 - 3. As enunciated in the Introduction to the Framework, the purpose of the proposed program is to generally provide a framework for the implementation of water quality trading activities in the Laguna de Santa Rosa watershed, where such activities are explicitly allowed under NPDES permits adopted by order of the North Coast Regional Water Quality. *See* Framework at p. 3. To that end, the Resolution and Framework should be written in such a way as to promote the program beyond just the City and the Town of Windsor's currently adopted NPDES permits, and avoid any perception that the program is limited in its application. For this reason, the City requests that Findings 6 through 14 be removed, and replaced with a more streamlined finding as set forth below, which will complement the already well-enunciated basis for the proposed program set forth in Finding 5: "For example, the City of Santa Rosa and the Town of Windsor have both been issued NPDES permits that contain final effluent limitations for total phosphorus, where one of the compliance options made available to meet those effluent limitations is the use of off-site nutrient load reductions carried out according to an approved nutrient offset program. To date, the City has complied via the Santa Rosa Nutrient Offset Program, which was approved in 2008 by resolution of the Regional Water Board (Resolution No. R1-2008-0061)."

Finding 8, page 2. The City acknowledges that the phrase "due to recognized exceedances of water quality standards in the Laguna de Santa Rosa and an apparent lack of assimilative capacity for additional nutrient loads" may be accurate. However, the City does not support it being used a rationale for the "no net loading" provision in the City's NPDES permit absent a Total Maximum Daily Load study, especially since disagreement with the basis for the "no net loading" provision continues. Therefore, we ask that this finding be modified to include this as a stand-alone phrase.

Finding 16, page 3. The Nutrient Offset Program was a result of negotiations between the Regional Water Board and the City to resolve the City's legal challenge to the 2006 NPDES permit's initial inclusion of "no net loading" provision for nitrogen and phosphorus.[4] Key aspects of the existing Nutrient Offset Program are not fully captured in the proposed Framework. Therefore, unless relevant aspects of the existing program are incorporated in the Framework and the City consents otherwise, the Nutrient Offset Program must remain available to the City as an avenue for compliance with the Permit's "no net loading" requirement for phosphorus. For this reason, the City requests the phrase "replace the existing Santa Rosa Nutrient Offset Program and to" be removed from this Finding. Consistent with the City's first comment above, the City also requests that the last phrase be modified to state, "as an approved method for complying with final effluent limitations that are in each of their NPDES permits."

Finding 22, pages 4-5. The Resolution states that "actions taken to generate credits under the Laguna WQT Framework must provide water quality benefits that are equal to or greater than

---

[4] *See City of Santa Rosa v. Regional Water Quality Control Board, North Coast Region,* Sonoma County Superior Court Case No. SCV241194.

the pollutant discharges they are meant to offset in place, in kind, and in time." *See* Finding 22. The City asks that this language be substantially clarified to identify what is intended with the "in place, in kind, and in time" reference. Offset credit projects may be located in different parts of the Laguna de Santa Rosa watershed, they may consist of different "types" of discharges than those requiring offset, and, given the specific nature of credit banking and expiration, they may not always coincide specifically with the same "time" as when the discharge to be offset occurred. The same "in place, in kind, and in time" language is repeated in the Framework (but it is not included in the prior approved Nutrient Offset Program). This language is a concern to the City as it may unnecessarily restrict (or make increasingly difficult) future offset credit projects. Further concern related to this provision is described in City comment on Framework Section 3.2.1 below. Considering the complexity of this provision, the City requests the opportunity to review this reference and potential clarification with Regional Water Board staff.

Finding 26, page 6. Finding 26 ends with "Regional Water Board Executive Officer retains discretion to … deny a proposal altogether to ensure that an effluent limitation established in an NPDES permit is met." Please clarify the intent of this provision.

Finding 27, page 6. The City requests that the word "ultimately" be inserted in the second line of Finding 27, between the words "does not" and "cause." Some projects may continue to "contribute" to existing exceedances (even if the project results in reductions in nutrients, other sources may result in continued exceedances, to which even a small (reduced) contribution could be considered a contribution), depending upon how "contribute" is assessed. Further, a project could have a very short term contribution, but significant long-term reduction. This proposed language addition will simply allow flexibility to take into consideration site-specific project details.

Comments on Framework:

General Comment (Continuing Viability of Nutrient Offset Program). The Nutrient Offset Program currently utilized by the City to comply with the "no net loading" provision in the Permit (and that is incorporated into the Permit) was the result of a negotiations between the Regional Water Board and the City. Without modification of that agreement (and the Permit), the Nutrient Offset Program must remain available to the City, in addition to the Framework, as a mechanism for compliance with the Permit's "no net loading" requirement for phosphorus. Further, the City seeks to conform certain elements of the Framework with the existing provisions of the Nutrient Offset Program so as to maximize the opportunity to use the Framework in place of the Nutrient Offset Program, and to expand both programs regarding the duration of credit banking. A few of our specific concerns are incorporated below. The City requests a review with staff to provide greater detail during an in-person meeting.

Introduction, page 3. The City requests that the Introduction be amended to note that the Framework may also be applicable under a future TMDL or other comprehensive beneficial use recovery or water quality attainment strategy.

Section 2.2 (Trading Parties) page 5. In the second sentence to this section, please add language to add non-point source dischargers: "However, nothing prohibits point or non-point source dischargers…"

Section 2.5 (Approved/Pre-Qualified Practices) page 6. To support continuation of phosphorus reduction practices approved for the three projects implemented under the existing Nutrient Offset Program, please change the first sentence to read "Supporting documentation for all practices used to generate water quality credits under this Framework must ~~first~~ be subject to public review…" Removing "first" could allow a proposed project to gain "pre-qualification" status and Board approval simultaneously.

Section 2.5.2 (Process for Approving Pre-qualified Practices), page 8. The existing Nutrient Offset Resolution provides specific timelines for acceptance or rejection of proposed projects. The City requests that the proposed resolution provide the same time certainty for proposed project consideration.

Section 3.1.1. (Credit Buyers), page 9. Regional Water Board staff may want to consider amending the language in this section now or in the future to support the potential for a water quality trading market based approach where third party entities could buy and sell offset credits.

Section 3.1.2. (Credit Sellers), page 9. As is noted earlier in the Framework (Section 2.2), a credit seller and credit buyer may be the same NPDES-permitted entity. The City requests that this section be amended to include the following sentence as the third sentence of this section, "A 'credit seller' and 'credit buyer' may be the same entity."

Section 3.2.1. (Avoiding Localized Impacts), page 9. The section requires that actions taken to generate credits 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." As noted above, the City asks that this language be removed or, substantially clarified to identify what is intended with the "in place, in kind, and in time" reference especially here given the additional "equal to or greater than" requirement. Offset credit projects may be located in different parts of the Laguna de Santa Rosa watershed, they may consist of different "types" of discharges than those requiring offset, and, given the specific nature of credit banking and expiration, they may not always coincide specifically with the same "time" as when the discharge to be offset occurred

If interpreted narrowly, such restriction could obviate any progress under the Framework. Further, multiple projects may be needed to offset the City's seasonal discharges (because each offset project may not on its own generate enough credits to fully offset the City's predicted discharge of phosphorus); thus, each offset project may not provide benefit "equal to or greater than" the pollutant discharges they are intended to offset. The City asks that this section indicate that projects can acceptably partially offset discharges.

This section also states, "There can be no localized impacts as a result of a credit trade." The City seeks clarification as to what is meant by this prohibition. It is important to consider that nutrient impairments within the Laguna are watershed based and that water quality improvements will occur collectively. Nutrient impacts are unlike toxics impacts which can be localized in nature. The City asks that the Framework inherently consider and assess water quality improvements within the entire Laguna waterbody instead of at specific project locations. The City believes that water quality trading concerns related to localized impacts don't really apply to nutrients and therefore would prefer that the associated language relevant to "localized impacts" be removed. At a minimum, please amending the language to state, "There can be no significant, detrimental localized impacts as a result of a credit trade."

Section 3.2.6. (Use of Public Conservation or Grant Funds), pages 10-11. In this section, the Framework specifies that credits generated by projects using public conservation or other grant funds can be used "only one time." Given credit banking, the City seeks clarification as to the meaning of this phrase, and recommends the language be modified so that any banked credits from such projects can be applied over time.

Section 3.2.7 (Credit Stacking), page 11. The City has concern about the credit stacking restrictions in the Framework. Projects that have multiples types of environmental benefits including offsets within the Water Quality Trading Program are exactly the types of projects that should be pursued. Wetland or an endangered species or rare plant mitigation credit provided by a project should not be the basis for proportionally reducing separate water quality related phosphorus credits that are generated. For example, wetlands offer multiple benefits like establishing or protecting habitat and nutrient trapping and a site set aside for mitigation could fully achieve its mitigation purpose without requiring any phosphorus removal benefits. This would not represent stacking and an offset credit should be allowed.

Not all mitigation credit types are overlapping, and the proposed proportional credit reduction may inhibit the City's ability to maximize beneficial project objectives. This limitation does not appear in other similar programs (Nutrient Offset Program, Resource Conservation District programs). Allowing projects to generate a range of environmental credits supports implementation of restoration projects in the watershed that provide multiple environmental benefits and draw on multiple funding sources. Thus, the City requests this provision be removed.

Section 5 (Trading Ratios), pages 11-12. The default trading ratio of 2.5:1 is too restrictive, and may detrimentally impact the ability of the City to successfully offset its discharges. An application of a 2.0 multiplier to address "uncertainty" where in some cases, phosphorus reductions from a project will be measured directly seems overly conservative, unreasonable and not technically supportable. Essentially, trading ratios should be qualitative, based on the uncertainty of water quality benefits resulting from a project.

The proposed trading ratios are inconsistent with projects implemented to date. The existing Nutrient Offset Program provides a 1:1 ratio where direct measurement of nutrient reduction is possible, and a more flexible, literature-based ratio is authorized where estimated nutrient reduction is necessary. The City requests the default trading ratio be more akin to that provided in the Nutrient Offset Program to allow more flexibility in determining ratios for uncertainty. This could be accomplished by eliminating the 0.5 trading ratio reduction limit. In addition, enhancement ratios could be incorporated into the Framework in order to promote implementation of targeted and/or prioritized watershed actions that may be too expensive to implement otherwise.

Sections 6.1 and 6.2 (Credit Life and Project Life), page 13. The proposed Framework states that the "life of all credits generated under this WQT Framework shall be one year, beginning Oct. 1 (*i.e.,* the beginning of the NPDES discharge season) and ending September 30." Please clarify how this provision will be implemented. The way the provision reads, it references a discharge season, not a calendar year, which could be very confusing, as calendar years are referenced in other sections of the Framework. For purposes of banking, the City asks for flexibility with this provision. In most cases, the later year in a discharge season could apply (i.e., a credit generated during the 2016-2017 discharge season would result in a credit in 2017),

to avoid the early expiration of credits, but language could be added to allow the Board flexibility in this determination.

Additionally, the language in this section could be seen to conflict with Section 6.3 (Banking Credits for Later Use), as this section indicates that the life of a credit is one year, yet such "one year" credits can be banked up to three years. As detailed in the next comment, expanding the timeframe during which credits can be banked and used, to avoid the expiration of credits before use, will foster program participants by reducing risk.

Section 6.3 (Banking Credits for Later Use), page 13. Similar to concern expressed with the Nutrient Offset Program, is the proposed continuation of the credit expiration term of three (3) years prescribed in Section 6.3. Illustrating our concern is language that indicates "a water quality credit generated in 2017 may be used to offset a discharge in the 2017, 2018, or 2019 discharge season." This will further limit the use of credits, in that the year they are generated "counts" towards the three years for which they can be used. The City asks that this provision be changed to avoid limiting use of credits.

To enhance the Board's consideration of the City's concern about credit expiration, the Regional Water Board is asked to recognize that the City's discharge conditions are exceptionally unique and not typical within water quality trading program scenarios. Our well-established and successful recycled water program re-uses most, and in average to dry years all of the recycled water that the City produces, resulting in years where the City has no discharge. Before the 2016-2017 record rainfall, the City's last significant discharge occurred more than six years ago during the 2010/2011 discharge season.

Because the City's discharges are episodic, offset credit expiration has been and will remain penalizing with an ongoing potential liability to the City's ratepayers. In circumstances where the most influential factor for discharge is unpredictable weather patterns, the City is in the untenable position of having to ensure sufficient credits exist to offset what may only be a potential discharge. With short credit expiration periods, the City will be required to invest in projects to earn and verify a statistically derived number of credits every year and having many expire before they're used. This is not sound public policy, especially given all the demands on limited public resources. The City requests that its unique discharge situation be considered further within the Framework, especially given the City's history and the Regional Water Board staff's experience under the Nutrient Offset Program.

Last, creating a Framework with such perishable credits invariably increases risk and cost, and unnecessarily reduces projects, environmental benefits, and availability, and increases credit cost. If water quality benefits have occurred and accrued, the credit should not necessarily expire. The City does not need short-term offset credits each year to attain compliance as much as the City needs certainty regarding the use of accrued offset credits over a longer term. Nutrient impairments in the Laguna have taken decades to accumulate and will take decades to resolve. Short term expiration of credits inhibits participation in the program and is inconsistent with the timeframe required for long term successful clean-up of the watershed.

The City requests that the Regional Water Board incorporate the concept that earned credits be allowed to accumulate, extend, and not expire. While we appreciate the three-year banking provision being carried forward from the Nutrient Offset Policy, the existing policy has already

proved problematic for the City with respect to credit expiration. The water quality benefits resulting from the City's projects don't expire.

Section 6.4 (Project Expiration and Renewal), page 13. The provision that allows a project to be renewed and generate additional credits after the end of an approved specified project life if its practices are still being maintaining and providing water quality benefit is very beneficial as it allows for the development of more complex and potentially more costly projects. This is a very appropriate provision as phosphorus offset credit practices can last for decades if properly maintained. The City requests that this provision pertain to the projects approved under the existing Nutrient Offset Program as well as those projects approved under the proposed Framework.

Section 7.2 (Credit Project Plan Approval Process), page 15. While some elements of the project plan approval process mirror the process developed and previously implemented under the Nutrient Offset Program, the Nutrient Offset Program includes provisions that were not carried over to the Framework regarding the timing of approval of proposed projects. For example, under the Nutrient Offset Program, the Executive Officer of the Regional Water Board has sixty (60) days to accept or reject a nutrient offset project or the project is deemed approved. *See* Nutrient Offset Program at Step 3. This element is crucial to providing project proponents with certainty regarding the viability and timing of a project; as Regional Water Board staff are aware, bringing an offset project to fruition can be a time-consuming and difficult task, which may involve other agency approvals. In order for the City to have some certainty that it can implement sufficient projects to offset its predicted discharge, so as to maintain compliance with the imposed effluent limitation, it is critical to have some indication of the timing of Regional Water Board action.

Section 8.2.1 (Required Elements of Initial Verification), page 16. The City is concerned that the proposed language related to the initial verification process improperly allows for a retrospective finding of ineligibility. The verification process is intended to confirm that a project, which has already been found to be credit-eligible, was implemented consistent with the project plan that was the basis of the eligibility finding. Please consider describing the Administrative Review to "Confirmation of project eligibility based on as-built conditions and consistency with approved Credit Project Plan" and Technical Review to "Adjustment of preliminary credit calculations to reflect as-built project conditions and confirmation that all required documentation (e.g., data files, sampling results, model parameters) are complete and correct." The City has concern about post project reviews to confirm project eligibility and the accuracy of initial credit calculations and needs to be assured of a project's credit worthiness before its implemented. Actual credits earned should be included in the post project review, as experience demonstrates that expected and earned credits can vary.

In conclusion, the City would like to reiterate our acknowledgment and appreciation to Regional Water Board staff for their efforts in shaping this innovative program, their diligent attention and care taken in preparing the Resolution and Framework, and for carefully considering the comments herein.

Thank you for your consideration. Please contact Rita Miller, Deputy Director of Environmental Services at (707) 543-3879 or RMiller@srcity.org with any questions.

Sincerely,

Jennifer Burke

Bennett Horenstein
Director of Water

Attachment A: Santa Rosa Nutrient Offset Program described in Regional Water Board Resolution No. R1-2008-0061 ("Nutrient Offset Program")

RRWPC

Russian River Watershed Protection Committee

P.O. Box 501
Guerneville, CA 95446
http://www.rrwpc.org

July 21, 2016

RRWPC Comments to:
North Coast Regional Water Quality Control Board
Attention: David Kuszmar
Delivered by Email to: David.Kuszmar@waterboards.ca.gov

Re: **Water Quality Trading Framework for the Laguna de Santa Rosa Watershed: Sonoma County**

These comments apply to Resolution NO. R1-2017-0027 and the attachment entitled: *Water Quality Trading Framework for the Laguna de Santa Rosa Watershed*.

Introductory Comments:

RRWPC wants to support this program, but we are informed by our experience with the Biological Opinion that public input is essential if a new program, especially one as complicated as credit trading, is going to succeed. It is significant that credit trading has failed in many places (outside of California) to accomplish its goals, and therefore it is essential that this program have a healthy and vigorous public involvement component.

The Biological Opinion's Estuary Project, for which low flow is a forever requirement in the lower river, is proving to be an abject failure, although other options are thus far not possible. There is nothing built into the document that allows for NOT lowering flows under any circumstances, even while severe environmental effects occur. This is a major failure on the part of the Agency as it has cost a great deal of anxiety because of possibly severe environmental impacts, and has not helped the fish one bit, not to mention major funds being expended and staff time utilized that could have been better used somewhere else.

RRWPC is unfamiliar with the details of determining values of credits, but we are aware that this is a process meant to initially provide offset options to the cities of Santa Rosa and Windsor in order to control some phosphorus pollution in the Laguna and therefore also the lower Russian River, while meeting their NPDES Permit requirements. We support the goals of the project as applied to Santa Rosa and Windsor and believe they are a good first step in the direction of controlling phosphorus inputs. We do not feel this should be a replacement for a phosphorus TMDL however, and hope you continue to move forward in defining the Laguna's amounts and sources of phosphorus pollution.

We support this initial phase allowing Santa Rosa and Windsor to choose a credit trading option as a trial balloon. We feel that for point source discharges, most of the program appears fairly well planned at this point. The Resolution is an excellent and detailed description of the situation with the dischargers.

We believe that the biggest failing of this proposal (water quality trading) is the lack of public involvement after initial framework is approved. While we feel most of the general proposal has been well thought out, considering it is an initial effort, yet the elimination of future public involvement is a serious drawback and probable mistake. It is clear from the title: *Water Quality Trading Framework*, that this project is intended for many types of credit trading projects to be developed in the future. Given that broad application without further public review, RRWPC can only support this project if the following are adapted before final approval of the program:

- RRWPC feels there should be a three or four-year trial period where this program is considered an experiment and that there should be an annual report to the Regional Board where public comment can occur on measured progress, details of the program and accomplishments, if any, and reports from traders if desired, etc. Also, new measures may be proposed and considered that were not originally anticipated. The Board should have an opportunity to make changes to the program on an annual basis during this trial period. (most important!)
- The goals of the program should be spelled out and the measurement of success defined. The circumstances under which ending the program (or not moving forward) should be considered and addressed. Also, if problems arise that were not initially foreseen, information should be available to describe how and whether they were resolved or if changes have become necessary.
- There is little stated about the circumstances under which enforcement will occur. If credit trades don't occur in a timely manner, at what point will enforcement actions begin to occur? What happens if appropriate projects don't come forward, or an inadequate number of credits obtained?
- We wish to see more details about how non-point source credits will be developed and enforced. This has been a sticky wicket in other locales. This should not be treated the same as point source discharges.

We want to acknowledge that Santa Rosa has been dragged into this process against their will. Their biggest argument for not wanting this trading project is that in many years they do not even discharge and that this program is a lot of time and expense for small value. That may appear true during drought, but this last year saw record rainfall. Apparently, Santa Rosa has a leaky system, because they discharged 1.1 billion gallons (I don't know if that's the final amount for the water year, but I know it was at least that much.) into the Laguna and Russian River. That's 25% of the approximately 4 billion gallons discharged annually before the Geysers was online. I don't know how many pounds of phosphorus that contains, but surely it is a significant amount, and demonstrates the weakness of their opposition argument and conversely, the necessity for this project.

Comments on Water Quality Trading Framework:

Our comments are organized, not by topic, but rather page by page notes on content. (The Framework Proposal was a very well organized and easy to follow.)

Last bullet on page 3: Do you mean to say: *The benefits of WQT must be realized without allowing NEGATIVE water quality impacts associated with credit-generating actions to occur in place, in kind, or in time*? (I'm sure you **do** want positive impacts.)

1. **Policy & Regulatory Instruments to Support Trading** (page 4)

   1.3 **Public Review**: It appears as though the only public comment allowed on trading project is right before Executive Officer's approval of supporting documentation for practices to be prequalified under Framework. Is there any circumstance, such as

subsequent to major revisions, where public review process can be reopened for additional comment? Also, will there be an announcement to the public if the project is denied?

2. **Trading Basics** (page 5-6)

2.3 Can you provide a larger colored map of the area where credits will be traded?

2.4: It would be nice to have a note here saying how many credit obligations Santa Rosa and Windsor have already accrued. Does Santa Rosa's wastewater have the same amount of phosphorus in every gallon of treated wastewater? Can you estimate how much phosphorus is in the 1.1 billion gallons of wastewater discharged this last water year? (I realize this information is probably not essential for the "Framework", but it would be interesting to have a little contextual information to illustrate program.)

2.5: Can SR or Windsor utilize ONLY pre-qualified practices? What if they propose NEW practices for pre-qualification, or is there only one opportunity to qualify practices? If new practices are proposed, would they go through the same public review process that allows public input?

2.5.1 **Practice Standards**: Do all of these apply? Can you describe term 'practice'? Is it the same as a project? (Some examples would be helpful here.)

Credit Quantification Methods: Do all of these apply or can they pick and choose?

Project Review/Verification Procedure:

Who verifies practices, projects and procedures for each project? Also, how is it determined whether professional certification or special expertise is necessary for design, installation, maintenance, credit quantification, or verification of a particular practice? What type of expertise (qualification level and standards) should be provided? I think this Framework needs to be more explicit here about Board expectations. I realize you refer to other sections where you do this. I will also note comments in those sections, if inadequate in our view.

2.5.2: Process for Approving Pre-qualified Practices (page 8): if there is a credit project proposed to plant hundreds of riparian trees, is that termed a 'practice'? At the top of page 8, the approval process is equated with the pre-qualifying process. If practices are pre-qualified, why do they need approval? This is confusing.

Bottom of page 8 states that 'significant' updates and/or revisions to practices that had received prior approval shall also be subjected to public review. How would the word 'significant' be interpreted here? Can you give a few examples?

3. **Trading Eligibility Criteria**:

3.2.1: Avoiding Localized Impacts: I believe that the sentence: '*There can be no negative localized impacts as a result of a credit trade*.' I believe it would be better if you add the word *negative* as impacts can be positive and that is not intended here.

3.2.5: **Timing of Framework Applicability**: Does this section apply if any activities that were given prior approval, currently come under regulatory requirements? If so, that would seem to contradict prior statements and be illegal.

4. Quantifying Pollutant Reductions for Water Quality Credits

I have concerns about the sentence (page 11) stating: "*Once approved, credit quantification methods for those practices shall be considered pre-qualified for future use*." I have concerns about the 'forevermore' aspect of this. Surely there may be circumstances where conditions change and the methods are no longer appropriate. We suggest revisiting these methods, and other aspects of the program, every five years. This should also include a public comment component. There will be a learning curve with this program and it is very important to leave a pathway to revisions.

5.1: Applicable Trading Ratios: (page 12)

Three situations for applying reduced retirement ratios:
The first application gives an example of "environmental values". This is helpful.
The second application is self-explanatory.
The third application needs more explanation and an example. What is meant by: '*Reduced uncertainty ratio*' and how are '*direct measurement of pollutant reductions*' conveyed? Example needed here.

6. Credit Characteristics & accounting Convention

6.1: Credit Life: (page 13)

I am a bit unclear about how the Credit life, Project life, and Banking Credits for future use life interweave with one another. The credit life is for one year only. Does that mean it must connect to a project before the year ends, but the project life can be varying amounts of time depending on the project? It seems as though immediately after the year is up, they can also decide to bank the credit for up to three years if no project has been discovered before the year ends. The three-year limit for banking credits seems very controversial. We would suggest extending it to 5 years ONLY for this first round when Framework is in its initial phases and then go back to three years after that.

7. Project planning, Pre-Screening, and Approval (page 14)

7.1 Credit Project Plans: (page 14)

The statement is made that projects should be designed with the primary goal of Improving water quality. This is general and vague. Shouldn't there be some kind of ranking of water quality improvements? Or could it be specified that improvements should address Laguna, Santa Rosa, and Mark West Creek impairments? It seems that addressing creek impairments should take a higher priority. **Furthermore, this section says nothing about required offsets of phosphorus. How can that be? We thought the whole point of this process was no net increase of phosphorus.**

Project Design and Credit Information: fifth item down: When would this item not be necessary?

Project Maintenance Plan: (page 15): Will there be a maintenance term attached to this plan? Will Regional Board retain oversight during term of maintenance or if there is no term? Would there be any enforcement if maintenance plan not adhered to? (see other comments for 8.3)

7.2 Credit Project Approval Process (page 15)

It is disturbing that there is no public review of this process and we believe that there should be. It is especially disturbing because the main impetus for this project appears to be ignored and dismissed: that is, the control of phosphorus in the Laguna and the supposed credit trade to limit the amount that gets circulated in the waterways.

(Footnote on bottom of page: What happens if parties do not provide adequate maintenance of credit projects? At what point might Regional Board enforcement measures be taken?)

8.Project Implementation & Verification (page 16)

8.1: Documenting Pre- and Post-Project Site Conditions
This is very vague. What kind of site conditions, and to what level of detail would you expect to see this? Does RB staff *definitely* check this or *maybe* check it?

8.2 and 8.2.1 Verification:

How does Regional Board staff assure that verification is unbiased and accurate? Is there a list of third party companies who are trusted and qualified to conduct verification that credit seller is required to use?

Implementation Review (page 17):
It states in this section that: "*Any discrepancies between the approved Credit Project Plan and as-built conditions must be noted*". And then what? Will someone take action on such a notation? What will that be (in general)?

9.3 Changes in Credit Status (page 19)

Retired: Why wouldn't a credit be used? What are the circumstances? Would drought be the only circumstance? Would there be any circumstances where an extension might be allowed? If the credit is developed, and all steps are followed, what other purpose might it be used for, if not for offset of wastewater discharges by City and Town?

9.4 Changes in Credit Ownership

If a project is completed and appropriate numbers of credits are received by City or Town, and this is the only purpose for which credits can be issued, how can others end up with the credits? Who else might end up with the credits and for what purpose? This seems incredibly complicated. Why would credits be needed for any other entities? Can you give some examples so a layperson can understand? Why are credits subject to change over time? Are credits ever good for over 3 years?

RRWPC thanks you for the opportunity to comment.

Sincerely,

Brenda Adelman