Regional Water Board Response to Comments

The North Coast Regional Water Quality Control Board (Regional Water Board) received three comment letters on the Draft Resolution R1-2008-0061 Approving the Santa Rosa Nutrient Offset Program for the Santa Rosa Subregional Water Reclamation System from Northern California River Watch (NCRW) and Coast Action Group (CAG). The Regional Water Board also received a letter from the City of Santa Rosa responding to the comments letters from NCRW and CAG. Regional Water Board staff responds to the comments as follows:

1. **Credits should not be granted for pollution reductions already required under other permits or that are prohibited by existing law**.

   RWQCB RESPONSE:
   The Offset Program is an interim mechanism to evaluate and approve projects that the City may implement to comply with the "zero, or no net loading" limitation. It provides an opportunity for water quality improvements in advance of TMDL promulgation, specifically in areas where the Regional Water Board's traditional controls do not reach, such as orphaned discharges and habitat restoration. The nutrient removal/reduction projects listed in the draft Offset Program were included as examples of the types of projects that might be evaluated by the Regional Water Board staff. The list is not exhaustive and should not suggest that any given project within the project type will be approved. To avoid any confusion or incorrect implication in this regard, Regional Water Board staff has removed the list of example projects from the proposed Program. Staff also proposes to explicitly state that no proposals for storm water-type offsets will be considered until after the City renews its municipal storm water permit so that there is no possibility that an offset will overlap with its permit requirements. The Regional Water Board is scheduled to review that permit before the end of 2008.

   The proposed Offset Program contains an explicit provision prohibiting credits from capital facilities controlling the same nutrient discharges that later become subject to other, additional regulatory controls imposed by the Regional Water Board. This provision is designed specifically to ensure that the Offset Program not preclude implementation options in the Action Plan that accompanies a TMDL. A TMDL specifies the maximum amount of pollutants that can be discharged from all combined sources (load allocations and wasteload allocations, plus background), so as to comply with the water quality standards. In advance of a TMDL, however, nothing prevents the allowance of a credit to one discharger for another non-point source discharge. Even after a TMDL is promulgated, there is some flexibility to implement offset programs if certain legal findings can be made.

   All nonpoint source discharges of waste fall within the jurisdiction of the Regional Board, and may eventually be regulated by waste discharge requirements, waiver, or Basin Plan prohibition. While the Regional Board's efforts to control

nonpoint source pollution have improved in recent years, implementation is often difficult and requires cooperative efforts from many parties. It is a question of policy whether the City should get credit for offsets of nonpoint source pollution which the Regional Board has authority to regulate but may not be doing completely due to resource constraints or other reasons. The merits of each proposal shall be reviewed on a case-by-case basis, but generally, early reductions ought to be encouraged, not prevented just because the Regional Board has the legal authority to directly regulate those sources, too. To be clear, an incentive-based program, including offsets, does not diminish the force and effect of any other controls on the nonpoint source discharger. Non-point source discharges in violation of prohibitions or other water quality standards are subject to enforcement under the Water Code. This issue would be much more problematic if the offsets were proposed in the context of allowing a new discharge. It is difficult to demonstrate with certainty that the new source discharge does not cause or contribute to violations of water quality standards based on a given offset. In this case, the discharge to be offset is an existing point source and any source reduction efforts through the offset program most certainly will improve the waterbody.

In addition, the proposed Offset Program provides an opportunity to address the impacts of excess nutrient loading in a more comprehensive manner than would be possible by simply reducing nutrient loading from a known point source discharge. The impacts of nutrients on beneficial uses are not necessarily only a result of high concentrations in the water column or high annual loading rates; rather, impacts occur from the secondary effects of low dissolved oxygen, altered pH regime, and alteration of the biological community. These excess nutrient effects occur in combination with the degradation of other factors that affect how nutrients are processed within the aquatic ecosystem. Other risk cofactors include riparian cover channel habitat, flow, and input of other oxygen consuming organic matter. Without improvements in the condition of these other risk cofactors, it is less likely that water quality benefits will be fully realized from nutrient reductions alone. The Offset Program offers an opportunity to direct resources toward improving the condition of all risk cofactors, such as riparian and channel habitat integrity, which may be missed through normal reduction of waste loading through permit controls alone. In addition to improving ecosystem conditions, and therefore assimilative capacity, alternative reduction scenarios, such as riparian and channel restoration, also reduce the amount of nutrients that are delivered to the aquatic ecosystem. In this way, the Nutrient Offset Program may contribute to the restoration and protection of beneficial uses as well as help the City meet its permit requirements.

2. **The proposed Nutrient Offset Program requires an antidegradation analysis**

Both NCRW and CAG assert that the proposed Nutrient Offset Program requires an antidegradation analysis. Among the reasons cited for the need for an

antidegradation analysis are that the imprecise measurement of nutrient reduction credits may result in increased delivery of nutrients to the Laguna and that the Program does not consider temporal and spatial aspects of nutrient loading in the Laguna.

RWQCB RESPONSE:
The Program is consistent with the federal and state anti-degradation policies. An analysis is only required when an agency action allows a decrease of surface water quality. In the context of an NPDES permit, this occurs when permitting a new discharge, substantially reducing a required level of treatment, or allowing significant expansion of an existing facility. The City's new permit does the opposite. In fact, the permit requires increased treatment levels, resulting in an improvement to water quality. The final effluent limitation for biostimulatory substances is more protective and stringent than the previous permit. Anti-degradation findings were properly made in the new permit, which contemplates an offset program in footnote 5 on page 13: "A 'no net loading' effluent limit may be met by: 1) reducing the effluent concentration below detectable levels through source control and/or treatment; 2) reducing loads through recycling/reclamation; and/or 3) reducing loads elsewhere in the watershed by an amount at least equal to the amount discharged (and of equivalent bioavailability) through an approved offset program." The Program is implementing number 3 of this provision. "No net loading" means, as its title suggests, that biostimulatory substances will be reduced in the Laguna, through a reduction in the discharge, or some other offset. Thus, a more detailed anti-degradation analysis is not triggered by the approval of this Program that is itself designed to improve water quality conditions.

The Program would provide a mechanism to evaluate and approve projects that the City may implement to comply with the "zero, or no net loading" limitation. Regional Water Board staff expects to see a continued decrease in nutrient loading to the Laguna over the coming years because the nutrient load from the Laguna will continue to decrease as a result of increases water recycling and diversions to the Geysers by the City, new or more stringent regulatory controls on nonpoint sources in the watershed, and as new nutrient reduction projects are implemented as a result of the Offset Program.

The discomfort with the calculation of nutrient reduction credits expressed in the comment letters is understandable. Regional Water Board staff agrees that the mechanism for the delivery of nutrients to any given watershed may not be perfectly understood and great care must be given to ensure the accuracy and the point of application of the reduction credit. In cases where Regional Water Board staff is not confident that a proposed nutrient reduction credit is well-supported by independent research or other defensible lines of evidence, the proposed project will not be approved.

The NCRW and CAG express concern that the use of a three-year averaging period to assess compliance with the final "no net loading" effluent limitations may result in water quality degradation. Because the discharge flow in any given year is highly dependent on the volume of winter rainfall, it would be impossible to accurately predict the actual nutrient reduction necessary to meet no net loading in any given year. In order to meet the no net loading requirement in its NPDES permit, the City must estimate the anticipated discharge for the following year and undertake projects to offset the anticipated nutrient loading before the loading occurs. In years when the discharge flow is greater than average, the estimated load to be offset may have been underestimated and projects implemented that did not fully offset the load actually discharged. In drier than average years, the City will offset more nutrients than required to meet "no net loading." The use of a three-year averaging period is a reasonable way to assess compliance with the final "no net loading" effluent limitations while accounting for the uncertainty of discharge flows from the Laguna Plant.

3. **The proposed Nutrient Offset Program requires compliance with the California Environmental Quality Act (CEQA).**

Comments on the draft Resolution assert that the proposed Nutrient Offset Program requires CEQA compliance.

RWQCB RESPONSE:
No CEQA documentation is required for the Regional Board's approval of the Offset Program. First, the program implements provisions of the NPDES permit, which is statutorily exempt from CEQA under Water Code section 13389. Second, in the absence of specific proposals, any environmental analysis would be too remote and speculative to analyze at this time. Moreover, because Regional Water Board staff maintains complete authority to disapprove any proposal, the program does not commit to any implementation. Therefore, the decision to establish procedural rules on how an individual proposal might be approved is independent of any proposal that might be approved and have an environmental effect. (See Cal. Code Regs., tit. 14, §15061(b)(3).) Commenters have not identified any potentially significant adverse impacts that would result from the offset program itself. Finally, individual proposals must comply with CEQA as explicitly provided for on page 3 of the Program.

4. **The Offset Program is inadequate to address nutrient impairment of Laguna de Santa Rosa.**

A common theme among the comments on the draft Resolution was that the proposed Nutrient Offset Program will not result in any real progress toward achievement of water quality objectives for nutrients (i.e., biostimulatory substances) for the Laguna de Santa Rosa. Another criticism of the proposed Offset Program is that the causes of the impairment are complex and proposed

Offset Program is not the mechanism to sort out the complexities; rather, it is the TMDL process that will fully address the complexities and implement solutions.

RWQCB RESPONSE:
The proposed Nutrient Offset Program provides to the City a framework to help meet the "zero or no net loading" effluent limitation for biostimulatory substances no later than November 9, 2011, as required in the NPDES permit for its Subregional Water Reclamation System. As proposed, the Nutrient Offset program is designed to offset, beginning in 2011, all or a portion of biostimulants (nitrogen and phosphorous) contained in the effluent discharge from the Laguna Treatment Plant through removal or reduction of other discharges of biostimulants in the watershed. In combination with the other options available, meeting the "zero, or no net loading" requirement will result in a real reduction in nutrient loading to the Laguna. Regional Water Board staff acknowledges that the TMDL process is a more appropriate mechanism to analyze the complexities of water quality conditions in the Laguna. The Program is intended as an interim measure and will continue only until an approved TMDL is implemented. It is anticipated that, by the end of 2013, the Laguna nutrient TMDL process will be completed and greater strides can be made to achieve the water quality objectives for biostimulatory substances.

5. **The proposed methods for calculating and estimating nutrient reduction credits from projects are not justified**.

RWQCB RESPONSE:
NCRW and CAG object that the 1:1 offset ratio for nutrient reduction credits for projects amenable to direct measurement is not justified and the procedure described in the proposed Program for nutrient reduction credits for projects where nutrient reduction is not amenable to direct measurement, is too vague and is therefore unenforceable. Staff has revised the proposed Offset Program to require that all projects proposals must include an appropriate Margin of Safety (MOS) to account for uncertainties in estimating reduction credits. The MOS will be applied to nutrient reduction credits before any project is approved, even for direct 1:1 offset credits. The Regional Water Board Executive Officer has the latitude during project review to consider the quality and bias of the relevant literature and lines of evidence before approving or rejecting a project. In addition, the Executive Officer may reasonably modify the nutrient reduction ratio based on the specific proposal.

Responses to Specific Comments from Coast Action Group (Mr. Alan Levine)

1. Would the measurements of effluent nitrogen and phosphorous affect TMDL findings?

   RWQCB RESPONSE:
   All effluent and receiving water monitoring data collected during the course of planning, implementing, or monitoring the success of a project may be used as supporting data for the TMDL. However, the primary use of effluent data collected under the Nutrient Offset Program is for the determination of the anticipated annual nutrient offset load and for assessing compliance with final effluent limitations for biostimulatory substances.

2. The plan for measuring or estimating nutrient quantity control for each project should be disclosed as part of Resolution.

   RWQCB RESPONSE:
   Under the proposed Program, projects are evaluated on a case-by-case basis and because the procedure for measuring nutrient quantity control may be different from project-to-project, it is not feasible to disclose or discuss all possible procedures as part of the Resolution or to disclose all possible procedures, which are not known at this time.

3. The Plan does not account for incidental runoff from wastewater recycling projects.

   RWQCB RESPONSE:

   The Program is a mechanism to offset the permitted discharges of wastewater to the Laguna de Santa Rosa or its tributaries, Santa Rosa Creek, and Colgan Creek. All other discharges of untreated, partially treated or reclaimed water to surface waters by the Discharger are prohibited by the City's NPDES permit. Proposed projects that have a significant potential to result in runoff to surface waters will not be approved.

Responses to Specific Comments from Northern California River Watch (Mr. Jack Silver)

1. What is basis of Finding 6 in the draft Resolution?

   RWQCB RESPONSE:
   Finding 6 of the draft Resolution was written by Regional Water Board staff and is similar to information presented in support of interim effluent limitations for biostimulatory substances in the NPDES permit fact sheet for Santa Rosa Subregional Water Reclamation System (Fact Sheet, section VII.B.4.e, page F-

66). The information that forms the basis for this statement was obtained from the City's annual reports.

2. No rationale for using annual average effluent nitrogen and phosphorous concentrations to calculate offset loads. The use of actual nutrient concentrations is more appropriate. (Note: "actual" is not defined, i.e., daily, instantaneous)

RWQCB RESPONSE:
Because the City is striving to offset the full amount of each year's anticipated nutrient loading, Regional Water Board staff anticipates that the City will propose a realistic estimate of the upcoming year's anticipated nutrient loading, using effluent nutrient concentrations that are expected during the months when the discharge to the Laguna commonly occurs. Using this average concentration and the average dry weather recycled water discharge determined by the City's water balance model is acceptable for calculating the estimated offset load. Actual nutrient concentrations for the upcoming discharge season will not be available when the City proposes the nutrient offset loading and the proposed offset project(s), and thus, cannot be considered.

3. No nutrient reduction credit should be granted for work done before the 2011-2012 discharge season.

RWQCB RESPONSE
NCRW objects to the provision allowing the banking of credits to be used in the first three years when the alternative final limit goes into effect. Allowing credits to apply for offsets made prior to when the effluent limits becomes effective may be entirely appropriate. As a practical matter, the Regional Water Board is keenly interested in facilitating early reductions in nutrient delivery to the Laguna. In addition, depending on the specifics of the offset project, banked credits may be appropriate when reductions in one year still have benefits in later years. However, staff agrees that certain scenarios could be problematic; for instance if so many credits were banked that no actual water quality improvement projects are implemented in a year or more. The proposed Program provides opportunities to review how the City proposes to apply credits in individual proposals and in its annual report. To make this clear, the Program needs to specifically grant the Executive Officer the discretion to ensure that any banked credits are distributed in a balanced manner to satisfy the no-net loading function, both spatially and temporally. In its annual report, the first being submitted prior to the discharge season in 2011-2012, the Executive Officer shall ensure that the City's proposal distributes any banked credits in a manner that maximizes the benefit to water quality.

4. No accrual of credit should be received by the City for construction of long-term capital facilities.

RWQCB RESPONSE
The Program specifically ends credits for capital facilities when either a TMDL is in place or any new, additional regulatory mechanism addressing the source of the credit has been put in place.

5. Executive Officer has no authority to accept or reject individual nutrient reduction projects outside of the permit process.

RWCB RESPONSE
The Regional Water Board's approval of the Program is a lawful delegation of authority to the Executive Officer to either approve or reject individual offset proposals. The offset program is contemplated in the NPDES permit, and Program itself specifies how staff is to implement it. It is no different than any other compliance determination made by staff pursuant to its normal delegated authorities.

6. In the Program Implementation section of the Offset Program, bullet 3, third sentence, change, "Executive Officer may provide notice and the opportunity for the public to comment" to "Executive Officer shall..."

RWCB RESPONSE
The Program has been revised to incorporate the requested change.