

SOUTHERN CALIFORNIA COASTAL WATER RESEARCH PROJECT
REQUEST FOR QUALIFICATIONS: BIOLOGICAL CONDITION GRADIENT MODELS FOR
STREAMS

SECTION 1. INSTRUCTIONS TO BIDDERS

The Bidder's complete qualification package (Package) to provide the services detailed are to be enclosed in a sealed envelope marked "Biological Condition Gradient" and addressed to:

Bryan Nece
Administrative Officer
3535 Harbor Blvd., Suite 110
Costa Mesa CA 92626

All supplemental materials requested within this RFQ must be attached to the Package. Any unauthorized conditions, limitations, or provisions attached to this RFQ may be cause for rejection.

All Bidders should inform SCCWRP in writing of their intention to submit a qualification package by January 19, 2015 via email (bryann@sccwrp.org), FAX (714-755-3299) or letter mail. Although this notification is not mandatory, it is necessary to ensure receipt of future updates to the bid notification. SCCWRP will hold an optional bidders meeting via conference call at January 20, 2015 at 10 am PDT. Access to teleconferencing information will be sent out to those to have sent an intent to bid and will also be posted on the RFP page of SCCWRP's website (www.sccwrp.org). This meeting is intended to provide Bidders the opportunity to ask questions and request clarifications about this document. SCCWRP's responses to will be sent to the Bidders by E-mail and posted on the SCCWRP web site.

If a bidder wishes to withdraw its Proposal, the Bidder may do so without prejudice sending an email to Bryan Nece (bryann@sccwrp.org) at any time before the time established for the opening of qualification packages.

Sealed qualification packages must be received at SCCWRP's offices, 3535 Harbor Blvd. Suite 110, Costa Mesa CA, by the hour of 5:00 pm on February 3, 2015, at which time, the Administrative Officer will open the qualification packages. Packages received by facsimile or E-mail will not be accepted.

This solicitation for qualifications shall not be construed as obligating SCCWRP to award a contract or to pay any compensation for the information solicited.

Contracts will be awarded based on the qualifications packages received to provide the following technical support services to assist in developing a biological condition gradient for streams (see

details below), on a time and material basis: 1) convene experts and work towards consensus on key technical issues related to the BCG development, conduct analyses, review and synthesize literature to answer specific technical questions, 2) provide expert advice, including written review of documents and participation at expert team meetings, and 3) assist in preparation of final project reports/documentation. These services will be required on an "as needed" basis. Consequently, this RFP is structured on a time and materials, task-order basis.

SECTION 2. EXPERTISE SOUGHT

The California State Water Resources Control Board (State Water Board) is developing nutrient objectives, focusing first on wadeable streams (SWRCB 2014, Appendix 1). Southern California Coastal Water Research Project (SCCWRP), a public agency for environmental research, is the technical lead supporting the State Water Board for this program. As part of this program, SCCWRP requires technical support services from individuals with expertise in developing a "biological condition gradient" model for wadeable streams. . Additional background and context for expertise sought and specific requirements are given below.

Based on early technical work in California waterbodies (Tetra Tech 2006), State Water Board staff proposed two approaches as options for nutrient objectives under consideration for California Environmental Quality Act (CEQA) scoping: 1) numeric guidance based on EPA ecoregional reference criteria (US EPA 2000a) and 2) the Nutrient Numeric Endpoint (NNE) approach (SWQCB Nutrient Policy CEQA Scoping 2011). The NNE approach is comprised of two components. First, it would include a suite of response indicator numeric endpoints (e.g., algal abundance, dissolved oxygen) linked to beneficial use protection (Figure 1). Second, it would include models to link the ecological response endpoints to site-specific numeric nutrient targets and other potential management controls.

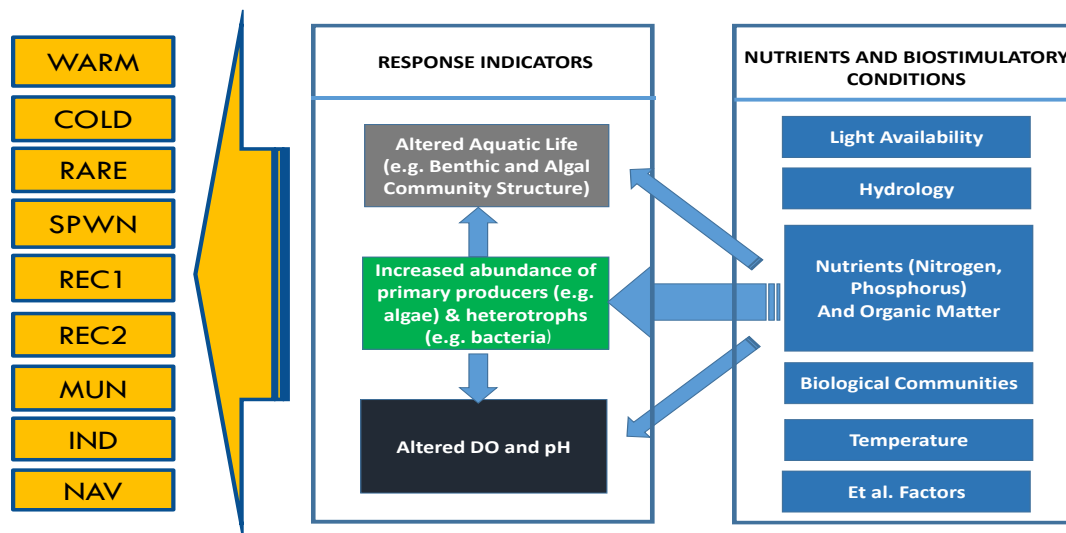


Figure 1. Conceptual model underlying Nutrient Numeric Endpoints (NNE) approach. Assessment endpoints would be based on response indicators such as algal abundance, dissolved oxygen and pH, which are linked to ecosystem services and beneficial uses.

Statistical or process models could be developed to link those assessment endpoints back to management of nutrient and stream co-factors (which include biostimulatory conditions).

A plan to develop science to support numeric guidance in wadeable streams has been developed (Appendix 2). Within this plan, a specific work element (1.2) calls for “**determining the numeric range of stream nutrient and response indicators (e.g. benthic algal biomass, ash free dry mass) that correspond to protection of beneficial use...**” The purpose of this element is to conduct analyses and synthesize literature to quantify the numeric range of stream eutrophication stressors (nutrient, algal abundance or organic matter accumulation indicators) that correspond to beneficial use protection. The outcome of this task will support policy decisions on regulatory endpoints for response indicators (assessment endpoints). It can also be used to support decisions on statewide or regional numeric nutrient targets, should the State Water Board choose to do so.

The “biological condition gradient” (BCG) is a conceptual model that describes the changes in aquatic communities, measured by aquatic life indicators (e.g., benthic macroinvertebrate or algal community structure), as a function of stress (e.g. algal abundance, nutrients; Davies and Jackson 2006; Figure 2). This model describes the predictable transition of biotic communities as a function of increasing stress, from pristine, to slightly modified ecological condition, then moderate, and finally, very low ecological condition. The stressors gradients, in the context used here, can be represented by nutrient concentrations or response indicators such as algal abundance, organic matter accumulation, or levels of DO and pH.

The “biological condition gradient” (BCG) is a conceptual model that describes the changes in aquatic communities, measured by aquatic life indicators (e.g., benthic macroinvertebrate or algal community structure), as a function of stress (e.g. algal abundance, nutrients; Davies and Jackson 2006; Figure 2). This model describes the predictable transition of biotic communities as a function of increasing stress, from pristine, to slightly modified ecological condition, then moderate, and finally, very low ecological condition. The stressors gradients, in the context of nutrient impacts such as eutrophication, can be represented by nutrient concentrations or response indicators such as algal abundance, organic matter accumulation, or levels of DO and pH.

Existing field data that capture this gradient can be used to explore the quantitative relationships between nutrients, ecological responses and desired narrative beneficial use support. This can be informed by exploring approaches that relate responses to stress and characterizing those responses in terms of beneficial use measures so unacceptable response conditions can be identified and used to guide further analysis. A variety of analytical approaches exist to determine the ranges at which a stream ecosystem transitions from no apparent effects to adverse effects in response to increasing stress (e.g., from low to high nutrient or algal abundance levels). One of these is the use of scientific expert consensus to interpret the range of response indicator and nutrient values corresponding to levels of condition along the BCG, such that thresholds and levels identified in the previous two approaches can be synthesized for their relevance to beneficial use attainment.

SCCWRP is requesting qualifications from consultants to work as a team with SCCWRP to develop a biological condition gradient model for California wadeable streams. The model would be used to place data from wadeable stream sample sites within aquatic life use tiers and can be used to relate these tiers back to algal metric and nutrient values.

Specifically, the objectives of this technical assistance are as follows:

- Conduct expert workshops to elicit from algal experts the position of sample sites in relevant classes along the biological condition gradient;
- Develop final BCG assignments for selected sampled sites in California by stream class;
- Crosswalk BCG tier assignments to algal metric and nutrient values from same site population and develop models to relate statistical response thresholds from Fetscher et al. (2014) to BCG tiers;
- Produce final report describing BCG efforts.

The successful bidder will provide the scope of services described in this RFP for up to a period of five years on an annual renewal basis. This work is not guaranteed and the quantity of these task orders is currently unknown.

SECTION 3. PROPOSAL SUBMISSION

Qualification Packages

Bidders are required to submit a cover letter which summarizes the collective qualifications and experience of the consultant team they are proposing as support. This cover letter should specify up to three co-principal investigators for the contract and a lead. For each consultant on the team, a curriculum vitae of maximum length of 10 pages, one sided page, 12 point font Roman, which demonstrates their qualification and experience. Included in this curriculum vitae should be a narrative description of expertise and qualifications. In addition, billing rates should be provided in an additional table in the cover letter for each member of the team, including supporting staff.

In addition, the following information must be included on the cover page (Table 2).

Table 2. Additional information that must be included in the cover page (cut, paste and complete)

Name of corporation, partnership, or individual in whose behalf the bid is submitted:	
Address: _____	
City/State/Zip: _____	
Phone: _____	FAX: _____ E-mail: _____
Tax Identification No.: _____	
Name	Title

I certify under penalty of perjury under the laws of the State of California that the foregoing representations are true and correct. Further, I certify that I have carefully examined the proposed qualifications, and hereby propose to perform and complete all the work for this project as specified to the satisfaction of SCCWRP, at the price(s) indicated within this document. In the event that this proposal is accepted by SCCWRP and the said work is awarded to the undersigned bidder, the said bidder agrees to sign and date, within seven (7) calendar days after it has been delivered or mailed to the bidder or its authorized agent, the Agreement for the performance of the work.

Signature of Bidder: _____

Title: _____ Date: _____

SECTION 4. QUALIFICATION PACKAGE EVALUATION PROCESS AND CRITERIA

Following the opening of qualification packages, SCCWRP will evaluate and score them. Each package submitted will be evaluated using the following criteria and scoring system, with a maximum possible score of 100. Each qualification package will be rated on a scale of 0 to 100 points, based upon the bidder's demonstrated expertise in the area sought.

- Qualifications (50 points): Qualifications among team members should include: 1) academic background in stream ecology, nutrient and carbon biogeochemistry, 2) conducting and completing stream biological condition gradient models for application to water quality criteria. Specifically, this includes: a) familiarity with stream benthic macroinvertebrate and algal bioassessment, b) experience with stress and traits-based analyses, c) experience with facilitating expert panels, and d) experience constructing BCG models.
- Experience (30 points): Points for experience will be awarded based on the extent of experience highlighted in the qualifications above. Additional weighting will be given to those with experience in applying BCG to streams in Mediterranean climate.
- Cost (20 points): Points will be awarded on cost based on the average billing rate of the top three (or fewer) team members identified as principal investigators in the cover letter of your qualifications package.

The bidders receiving the highest score will be awarded a contract to perform the work.

