



Request for Proposals

Surface Water Quality Trend Analysis: RDN Community Watershed Monitoring Network Data 2011-2017

Issue Date:

March 9th, 2018

Closing:

**3 complete hard copies plus 1 electronic (CD or USB) copy prepared in .pdf format
of each Response must be received before 2:00 PM Pacific Time on March 28th, 2018**

Closing location:

**Regional District of Nanaimo
Regional and Community Utilities
Second Floor
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2**

Contact person:

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1 Background

The Regional District of Nanaimo (RDN), on the east coast of Vancouver Island, is a region of over 155,000 residents covering the four municipalities of Nanaimo, Parksville, Lantzville and Qualicum Beach, plus 8 Electoral Areas. There are 7 major basins in the region, which are comprised of several watersheds and sub-watersheds. These 7 areas are referred to as Water Regions for planning purposes. In all Water Regions, both groundwater and surface water are important for community water needs and for maintaining healthy aquatic ecosystems.

The RDN's Drinking Water and Watershed Protection (DWWP) Action Plan identifies *Water Quality Monitoring, Data Compilation and Mapping*, as a key action. The objective is to better define the state of water quality in the region and make this information readily available and understandable to decision-makers, so that regional water resources are healthy and protected.

Since 2011, surface water quality monitoring for turbidity, temperature, dissolved oxygen and specific conductivity has been implemented through the DWWP program in partnership with MOE Water Quality staff, Island Timberlands LP, and community volunteer stewardship groups. This is referred to as the RDN Community Watershed Monitoring Network (CWMN).

Grab samples are taken once per week for 5 weeks in the summer low-flow period (August-September) and again for 5 weeks in the fall-flush period (October- November). Training as per provincial protocols is adhered to which includes quality assurance / quality control completed for 10% of the sample sites.

Up to seven years of surface water quality data has been collected at over 50 sites in the region, (see Fig. 1 below) via the CWMN. Each year the data are collected by trained volunteers, and then entered into the Provincial EMS database by RDN staff.

To date, reporting on this data has included: six data summary reports/presentations (one for each year 2011-2016), three 3-year trend reports (each for a different set of sites) and one lab analysis report. The reports have been verbally presented at public meetings and published on the RDN website as well as in the Provincial Ecological Reports Catalogue (Eco-Cat).

At this point there is a need to perform a comprehensive analysis on all the data collected so far, in relation to other relevant data such as precipitation, streamflow and land use to understand trends and provide recommendations on how to address water quality concerns and prioritize future efforts.

The available budget for this project is \$20,000.

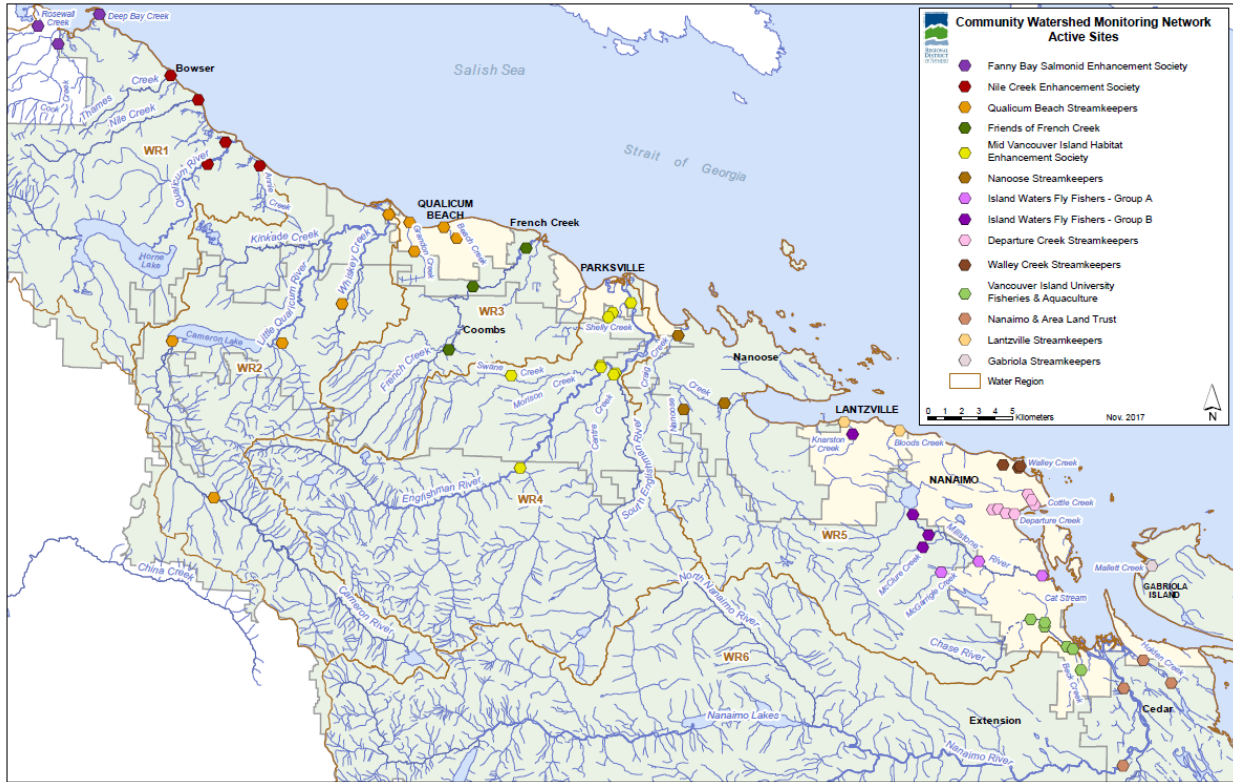


Fig. 1 – RDN Community Watershed Monitoring Network – active surface water sampling sites

2 Scope

2.1 Project Objectives

The objective of the *Surface Water Quality Trend Analysis 2011- 2017* is to aggregate and interpret the surface water quality data collected via the CWMN to date.

The RDN is seeking a firm that can offer professional biologists and/or other environmental professionals with expertise in environmental water quality to analyze the multi-year CWMN water quality dataset (dissolved oxygen, turbidity, temperature and specific conductivity), interpret trends and provide recommendations for follow-up action.

Some sites have been monitored for as many as seven years, yet the data has not been analyzed across the history of the program to date. Thus far, only yearly summaries that graph the data from all the sites and 3-year trend reports for select groupings of sites have been produced by the RDN and MOE – all posted at <http://www.rdn.bc.ca/community-watershed-monitoring#Results>. The purpose of this proposed professional comprehensive analysis is to compile and analyze the entire dataset collected since 2011, and to include other relevant data (climate, streamflow, land use) in the review to help develop a sound interpretation of trends over time. The value of this exercise is to make meaning out of the data collected through the CWMN. Where trends of degrading water quality or consistently poor water quality are identified, the analysis should suggest recommendations for action that can be further

developed by the RDN (through the DWWP program or through RDN Bylaws or Development Permit Areas) or by partners.

Through this analysis, there is also an opportunity to identify background conditions and propose how this data could be used to inform the development of provincial Water Quality Objectives (WQOs) for priority watercourses where they don't currently exist, as a provincial tool for understanding stream-specific baseline health and developing stream-specific protection criteria.

2.2 General Deliverables

In order to develop the trend report, the consultant must analyze the multi-year CWMN surface water quality dataset – turbidity, temperature, dissolved oxygen, specific conductivity – for all the monitoring locations in the RDN Community Watershed Monitoring Network.

This includes:

- Raw water quality data (2011- 2017) for download from the Provincial EMS database
 - includes all CWMN data + other Provincially collected data for the watercourses that are part of the CWMN
- Pivot tables from Provincial EMS database export
- Lab analysis results for select sites (E.coli, total phosphorus, metals)
- Graphs and reports available for years 2011-2017

In addition, the consultant is expected to review other relevant datasets to assist with interpreting the water quality data, including:

- o Climate data (Environment Canada & other)
- o Streamflow data (Water Survey of Canada, FLNR, DFO)
- o Land use data (RDN & potentially private forestry land cover data if made available)
- o Water quality objectives (BC MOE), where applicable

The analysis should result in a report on spatial water quality trends in the streams/rivers/creeks monitored via the RDN Community Watershed Monitoring Network.

The final deliverable is a **Trend Report** that organizes the findings of the analysis based on Water Region, noting which stewardship groups collected the respective data. The final report should be comprised of:

- I. Graphs + maps
 - a. Water quality data compared to provincial guidelines for each of the 4 parameters (turbidity, temperature, dissolved oxygen, specific conductivity), aggregated by Water Region, displayed by site.
 - b. Precipitation data relevant to the monitoring periods and locations each year.
 - c. Streamflow data relevant to the monitoring periods and locations each year.
 - d. Land Use data relevant to the monitoring locations i.e. upstream uses & associated risks; change over time.

- II. Written interpretation
 - a. Report on spatial water quality trends observed
 - b. Include a professional opinion on why certain trends are occurring i.e. commentary on the influencing factors

- III. Recommendations
 - a. Outline how to address water quality concerns on specific streams; these would be high-level recommendations that would prioritize further efforts for the RDN DWWP program and partners including but not limited to RDN Development Services, member municipalities, and provincial agencies. For example, recommendations could give direction on:
 - Further or more in-depth monitoring (i.e. biological, chemical, physical etc.)
 - Restoration opportunities
 - Targeted outreach
 - Policy review/update/advocacy (i.e. bylaws, development permits, regulations)
 - Etc.
 - b. Display recommendations spatially on a map(s).
 - c. Propose future reporting in terms of how to aggregate water quality results annually for the purpose of reporting on the RDN Regional Growth Strategy, Goal 2 “Protect the Environment”, Indicator 5 “Surface Water Quality” (see reference material).

- IV. Reference to Provincial [water quality objectives](#) (WQOs) where applicable
 - a. WQOs already exist for Englishman River, Little Qualicum River and French Creek
 - b. Based on need and priority revealed through the analysis, *propose how the development of WQOs could be informed by this data* for other priority watercourses where they don’t currently exist.

As part of the final deliverable it is expected that the consultant will submit the **refined, processed datasets** they used to perform the analysis in Excel Spreadsheet format and additional digital formats as agreed upon.

As described in section 5.2.4, the project proposal should outline a project timeline with milestones such as proposed progress meeting dates, other key events, and major project deliverables i.e. draft submitted for review, final revisions completed.

2.3 Reference Information

The successful consultant is expected to be familiar with the following:

- The DWWP website: www.dwwp.ca
- All reports posted at <http://www.rdn.bc.ca/community-watershed-monitoring#Results>
- Provincial water quality monitoring indicators, protocols and programs
<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/monitoring-water-quality>
- [RDN Regional Growth Strategy](#) → particularly: Goal 2, Indicator 5 [“Surface Water Quality”](#)

- Applicable RDN & Municipal bylaws
- Water Survey of Canada Streamflow data and other hydrometric data provided by RDN
- Land Use Data provided by RDN; potentially also from Municipalities and Forestry Companies
- Environment Canada precipitation data

The RDN will assist the successful consultant by providing RDN datasets and by directing the consultant to additional sources of applicable information and data.

3 Schedule

The following dates, other than the RFP closing date, are guidelines only and may be adjusted based on the schedule provided by the successful proponent.

3.1 Closing Date

Three (3) complete hard copies of each proposal plus one (1) electronic copy on CD or USB flash drive, prepared in .pdf format, must be received before **2:00 PM, Pacific Time, on March 28th, 2018** at the address on the front cover of this RFP.

One hardcopy should be marked as original, the others as copies. Any discrepancies between the electronic copy or paper copies, the marked "original" hardcopy will prevail.

Proposals sent by facsimile (fax) or e-mail will not be accepted.

There will be no public opening for this RFP.

Proposals are to be submitted in sealed envelopes clearly marked with:

1. Name and address of the Proponent
2. Proposal for *Surface Water Quality Trend Analysis: RDN Community Watershed Monitoring Network Data 2011-2017*

3.2 Late Responses

Proposal envelopes will be marked with their receipt time at the closing location. Only complete proposals received and marked before closing time will be considered to have been received on time.

Hard copies of late submissions will not be considered or evaluated and will be returned to the proponent.

In the event of a dispute, the proposal receipt time will be as recorded at the closing location for the hard copy.

3.3 Anticipated Award Date

The project will be awarded to the successful proponent by April 16th, 2018.

3.4 Project Initiation Meeting

The successful proponent is expected to arrange a project initiation meeting on a mutually agreed upon date and time between April 17th - 27th, 2018 or thereabouts.

3.5 Final Project Deadline

All the deliverables are expected to be submitted to the RDN by September 14th, 2018 unless an extension to this date is mutually agreed upon and established in writing. The proposal should indicate a general schedule of proposed milestones such as submissions of drafts for review prior to the final deadline.

4 Extra Works

The consultant must receive written approval prior to commencing any additional works which will affect the project cost or schedule. The consultant is to submit a Change Order indicating the impact the extra or additional works will have on the project for written approval from the RDN.

An invoice encompassing additional works that have not been approved in writing will not be accepted by the RDN.

5 Proposal Submission

5.1 General

This section describes the expectations for proposal submission and the basis for evaluation. Proposal layout and content should be in general alignment with these expectations to facilitate comparative evaluation. **Submissions should not exceed 15 pages, single-sided, single-spaced, minimum 11pt font size. Appendices can be included for materials supplementary to the submission and are requested to be bound separately.**

Before submitting proposals, proponents must satisfy themselves about the nature and location of the work, local conditions, the professional services, equipment, technology and facilities needed for the execution of the work, and all other factors that might have a bearing on their proposal. Proponents are fully responsible for obtaining all information required for the preparation of proposals and the execution of the work.

Proponents are solely responsible for their own expenses in preparing and submitting Proposals, and for any meeting, negotiations, or discussions with the RDN or its representatives and consultants, relating to or arising from this RFP. Proponents agree that by participating in the RFP process, and/or submitting a Proposal, they have no claim for compensation.

5.2 Submission - Proposal Content

5.2.1 Cover Letter & Signature

The Proposal should include a cover letter summarizing the Proposal and indicate why the RDN should select your firm. This letter should be signed by a person authorized to legally bind the Proponent to the statements contained in the Proposal.

5.2.2 Corporate Qualifications and Experience

- a. Include a brief summary of the company's background, area(s) of expertise, organization chart, and number of employees.
- b. List any sub-consultants proposed, and provide a similar summary as above.
- c. Provide at least three (3) project abstracts that clearly outline previous experience with similar projects. The referenced projects shall be of similar or greater magnitude and have been successfully completed by the company within the past three (3) years. The project abstracts shall clearly note the project value, project constraints, location, Project Manager, key staff members, client names, client references and their current contact details. Project references may be contacted and their response may be used to form part of the evaluation score.

5.2.3 Experience, Depth, and Breadth of Project Team

- a. Provide the Resume of the Project Manager and all other project team members that would be directly involved in the project. Relevant experience, qualifications, credentials, and notable achievements in each area of the work should be detailed.
- b. Provide a table clearly indicating what role and responsibility each team member will play, the anticipated hours of each, and the total role and project hours.

5.2.4 Approach and Methodology

- a. Provide an overview of the project to confirm understanding of the scope of work and clearly define and describe how the proposed approach would meet those requirements. At a minimum, the Proponent should identify the project constraints and challenges, the sequence and timing of milestones, the respective expertise involved, and their time allocation for each.
- b. Submit a schedule of key tasks and milestones with dates and sufficient detail for the Evaluation Team to assess the reasonable ability of the Proponent achieving the results in the time stated.
- c. Indicate when work would commence and approximately how long it would take to complete the assignment. Proposed start dates, progress meeting dates, milestones, other key events, and major project deliverables shall be clearly identified on the project schedule. The schedule shall identify the critical path, delineate what resources will be required, and when they will be required.

5.2.5 Project Management and Quality Assurance

- a. Demonstrate the approach to project management and highlight the procedures to be utilized to ensure submissions are completed and delivered on time and on budget.
- b. Provide a description of an internal quality assurance and control program in place, including the provision of a quality assurance and control plan that ensures senior technical review of relevant project activities.

5.2.6 Proposed Fee

Provide pricing for the project tasks and milestones in a table showing a breakdown of fees using the same headings from the consultant's proposed methodology. The fee structure shall include hourly charge out rates and man-hour requirements for all personnel involved, sub-consultant fees, disbursements, meetings and all other costs to complete the work. Items listed as optional shall be shown separately. The total project cost is to be considered an upset limit, not to be exceeded unless approved in writing by the RDN, and shall be inclusive of all Consultant salary costs, general and overhead expenses, and disbursements. Disbursements shall include the costs of printing and reproducing, drawings, reports, travel/accommodation costs, out of pocket expenses, and all other anticipated expenses. Any applicable taxes should be shown as a separate line item.

5.3 Proposed Contract

Proponents need to identify any specific provisions contained in this RFP with which it is unwilling or unable to comply from the attached Appendix A- Draft Client-Consultant Agreement and suggest replacement language.

5.3.1 Contact Person

The contact person for the RDN is:

Julie Pisani
Program Coordinator, Drinking Water & Watershed Protection
Regional District of Nanaimo
Office Phone: 250-390-6586 Email: JPisani@rdn.bc.ca

5.3.2 Requests for Information

Any requests for information (RFI) related to this RFP are to be directed, in writing by email, at least seven (7) calendar days prior to the Closing Date, to Julie Pisani at the RDN. Email contact is JPisani@rdn.bc.ca.

RFI's and answers will be recorded and distributed via addendum posted to the RDN website (www.rdn.bc.ca) and to BC Bid (www.bcbid.gov.bc.ca). It is the responsibility of the Proponent to download and obtain any addenda posted. Information obtained from any other source is not official and should not be relied upon.

5.3.3 Changes to Proposal Wording

The Proponent will not change the wording of its proposal after the closing date and time specified on the front cover of this RFP and no words or comments will be added to the proposal unless requested by the RDN for purposes of clarification.

5.3.4 Withdrawal

Proposals may be withdrawn prior to the deadline upon emailed notice to Julie Pisani. Withdrawn proposals may be replaced by alternative proposals providing emailed notice of intent is delivered to Julie Pisani at least 24 hours prior to the deadline for closing noted above.

Proposals must remain valid for 90 days following the RFP closing date and time noted. Proposals are irrevocable after the closing date and time.

5.3.5 Acceptance of Proposals

This RFP is not an agreement to purchase goods or services. The RDN is not bound to enter into a Contract with any proponent. Proposals will be assessed in light of the proposal review criteria. The RDN will be under no obligation to receive further information, whether written or oral, from any proponent. The offer of services will prevail whether accurate or not.

The acceptance of any proposal may be subject to approval by the Board of the Regional District.

5.3.6 Definition and Form of Contract

The receipt of an offer of services with a proposal will not constitute a contract. A contract will not be entered into until the RDN accepts a proposal and the RDN and the proponent enter into a full written contract as a result of this RFP. Only after a contract is mutually agreed to and signed by both parties, will a proponent acquire any legal or equitable rights or privileges. A draft contract is included as an Appendix for review by the proponent. Any changes must be requested in the proposal.

5.3.7 Modification of Terms

The RDN reserves the right to modify the terms of this RFP, in its sole discretion, at any time up to 5 working days prior to the noted closing date. This includes the right to cancel this RFP at any time without entering into a Contract.

5.3.8 Ownership of Responses

All documents, including Responses, submitted to the RDN become the property of the RDN. The RDN is bound by the provisions of the Freedom of Information and Protection of Privacy Act. All Proponents submitting Proposals pursuant to this RFP are advised that such Proposals will be treated as public documents and the contents of the same disclosed upon written request if required to do so pursuant to the Act. The successful proponent's name and dollar amount of any award is public information and may be routinely released (either posted or upon request).

5.3.9 Confidentiality of Information

Information pertaining to the RDN obtained by the proponent as a result of participation in this RFP is confidential and must not be disclosed without written authorization from the RDN.

6 Proposal Evaluation Criteria

The following criteria identify the key components on which Proposals to this RFP will be evaluated.

Evaluation Criteria	Point Value
Corporate Qualifications and Experience	20
Project Team Experience Depth and Breadth	20
Approach and Methodology	30
Project Management and Quality Assurance	10
Proposed Fees	20
Total	100

When awarding points for pricing, a comparative formula will be used where the lowest price gets all the allocated points and all other submissions is scored based on the following formula:

$$\text{Lowest price} / \text{Other proposals price} \times \text{Points available}$$

NOTES:

1. A score of ZERO (0) on ANY of the Rated Criteria items MAY result in disqualification of a Submission.
2. These are the ONLY factors which will be used to evaluate the submission.
3. The highest scoring or any submission will not necessarily be accepted.

Proposals submitted should be in enough detail to allow the RDN to determine the Proponent's qualifications and capabilities from the documents received. Every effort should be made to include complete details of the proposed work. The selection committee, formed at the RDN's sole discretion, will score the Proposals in accordance with the criteria provided.

The selection committee will proceed with an award recommendation and the RDN may proceed to enter into negotiations with the highest evaluated proponent with the intent of developing an agreement. If the parties after having bargained in good faith are unable to conclude a formal agreement, the RDN and the Proponent will be released without penalty or further obligations other than any surviving obligations regarding confidentiality and the RDN may, at its discretion, contact the Proponent of the next best rated Proposal and attempt to conclude a formal agreement with it, and so on until a contract is concluded.

The RDN reserves the right to award the assignment in whole or in part or to add or delete any portion of the work. Throughout the evaluation process, the evaluation committee may seek additional clarification on any aspect of the Proposal to verify or clarify the information provided.

The RDN reserves the right to reject any or all Proposals or to accept the Proposal deemed most favorable in the interest of the District. The lowest priced or any Proposal may not necessarily be accepted.

7 Appendices

A – Consulting and Professional Services Agreement [Template].