This CWWF Application has already been submitted.

CLEAN WATER AND WASTEWATER FUND

APPLICATION FORM

PLEASE READ THE PROGRAM GUIDE in order to ensure you submit all required information before completing this Application Form.

The Application Form must be completed in full and submitted with all mandatory supporting documentation. See the Program Guide for more details. Applicants should be aware that information collected is subject to provincial freedom of information legislation.

All sections of the application form must be completed. If a question is not relevant to your specific project, enter N/A. Where possible we have provided examples to assist you in the completion of the Application Form.

Please provide only specific concise project information.

** Item is required to save or submit the form.*

Application Number: **13**

A. Applicant Information

Legal Name of Applicant: The Corporation of the City of White Rock	
Applicant Mailing Address: 15322 Buena Vista Avenue	City/Town: White Rock
Province: BC	Postal Code: V4B 1Y6
Primary Contact First Name: Greg	Phone Number: (604) 541-2184 Ext:
Primary Contact Last Name: St. Louis	Email Address: GStLouis@whiterockcity.ca
Title of Primary Contact: Director, Engineering & Municipal Operations	Alternate Contact Name: Saad Jasim

B. Project Information

Project Title *:	Arsenic and Manganese Water Treatment Project
1.	Select the Project Type that describes the largest percentage of capital works or asset management/design & planning work being undertaken in this project. Water
2. a)	Nature of the project. New
b)	Select the eligible investment categories that describes the proposed project. See the Program Guide for full description. New construction projects
3.	Provide a brief description of the project (1,000 characters or less). The proposed project involves the construction of water treatment infrastructure to treat the City of White Rock's source water to remove Arsenic and Manganese and meet the Guidelines for Canadian Drinking Water Quality (GCDWQ). Fraser Health Authority has issued a directive that requires the City to provide treatment by December 31, 2018 to lower the arsenic levels below the Guideline limit. The City's water has elevated levels of manganese which exceed the proposed MAC and

	aesthetic limits in the GCDWQ. Should Health Canada proceed with the MAC proposal, a treatment system must be operational one year after the limit is changed. Prior to the design build procurement process, the City will conduct value engineering to ensure that the capital works: represent good value for money, utilize best technology & practices, demonstrate efficient use of resources, exhibit long-term sustainability, and use new and innovative approaches if appropriate.
4.	Provide the rationale of why the project is needed and the objectives it will achieve. On October 30, 2015 the City of White Rock purchased the White Rock water utility from EPCOR White Rock Water Inc. and took over its operation. The system supplies water to a community of approximately 20,000 people located in White Rock, the Semiahmoo First Nation, and portions of Surrey. The system draws its water from 7 groundwater wells which have levels of arsenic that are within, but near the limit of 0.010 mg/L set by the Health Canada in the Guidelines for Canadian Drinking Water Quality (GCDWQ). Several wells have consistent arsenic levels at 0.009 mg/L on an ongoing basis. The City regularly communicates with Fraser Health Authority, which has issued a directive requiring the City to provide treatment by December 31, 2018, if arsenic levels increase above existing levels. On occasion, arsenic concentrations have exceeded GCDWQ maximum acceptable concentration limits. While Fraser Health currently considers the water safe, there are concerns from some residents who feel that arsenic levels have been trending up. In addition to arsenic, the City's water has elevated levels of Manganese. The majority of the City's wells are consistently over the new Manganese limit (MAC of 0.1 mg/L) proposed by Health Canada. Additionally, the Manganese levels exceed the aesthetic limit in the GCDWQ of 0.05mg/L. Above these levels, manganese can affect the taste, smell and/or colour of the water, and at levels exceeding 0.15mg/L, it can stain plumbing fixtures and laundry. Furthermore, removal of manganese will protect the most sensitive members of the population against potential health impacts and reduce consumer complaints regarding discoloured water and staining of laundry. Currently, five of the City's seven wells have manganese levels between 0.05 and 0.18mg/L. The proposed project involves the installation of two water treatment plants which will remove arsenic and manganese. The City also intends to install a pre-oxidant technology and is currently conducting a comprehensive pilot study in collaboration with RES'EAU-WaterNET, UBC to confirm the best technology. Overall, this project will allow the City to provide clean, safe drinking water that consistently meets the GCDWQ to the residents of their community in the shortest time frame possible to enhance and protect public health. The City would also like to achieve the following objectives with their new drinking water infrastructure: • Represent good value for money over the life cycle of the infrastructure; • Support sustainability principles; • Utilize best technology and practices; • Demonstrate efficient use of resources; • Exhibit long-term sustainability, including operational viability, asset management (maintenance), and environmental sensitivity; • Use new and innovative approaches, if identified as appropriate by the pilot study mentioned above; and • Use the best available economically feasible technology, if applicable. The City will conduct a value engineering exercise before the design build procurement process to evaluate the proposed capital works and, if necessary, modify or specify

the number of treatment plants (two plants or one), treatment process and/or equipment to meet the above objectives.

5. Provide a detailed list of the physical works of the project.
Example:

Project Works:

- Treated wastewater effluent pipeline and outfall;
- Approximately 10km of effluent forcemain;
- Pumping system for the forcemain;
- Outfall structure for discharge to a river;
- Civil, mechanical and electrical works and supplies

Project Works:
The following are required for the two treatment plants at Merklin and Oxford or for a single plant at the Oxford site • Watermain from Merklin Site to Oxford Site (only required in single-plant scenario) • Site work and yard piping • Landscaping • Pre-oxidant process • Pressure filters • Chemical feed systems (sodium hypochlorite) • Chemical feed systems (Ferric Chloride) • Chemical feed systems (polymer) • pH adjustment system • Piping and valving • Compressors • Centrifuge • Backwash gravity thickener equipment • Electrical, instrumentation and controls • Backup power • Gravity thickener tankage • Building (Wood Frame) • Building HVAC systems • Lab equipment

6. a) Provide physical address of project. *
Merklin site (15334 North Bluff Road), Oxford site (1444 Oxford Street)

b) Project Latitude:
(-122.7975)

c) Project Longitude:
(49.0309)

** Map of project location is mandatory. See the Program Guide for a list of mandatory documents.*

7. a) What is the population of the community?
20,000

b) What is the population that will be served by this project?
25,000

c) List the communities below that will benefit from the project:
• The population of the City of White Rock (~20,000 people); • 85 metered connections in Surrey (~200 people); • The Semiahmoo First Nation (~50 people living on the reserve); and • 260 commercial and institutional connections (~5,000 population equivalents)

8. a) Estimated Project Start Date:
01/08/2016

b) Estimated Project End Date:
31/12/2018

c) Estimated Construction Start Date:
01/09/2017

d) Estimated Construction End Date:
31/12/2018

e) Identify project risks. Please list all that are known and include your evaluation and proposed mitigation for each risk. See below for example. (i.e. seasonal limitations to construction; detailed design work; public oppositions expected; referendum required; Environmental Assessment/Aboriginal Consultation; etc...)

Example Timeline Risks:

Issue/Risk	Timing or Impact	Mitigation
Fisheries construction window	Construction allowed October to March. If the fisheries window is missed, construction will be delayed a full year.	Project requires only one year of construction which allows for 3 construction seasons within program period.

Timeline Risks:

Issue/Risk	Timing or Impact	Mitigation
Tree clearing on Oxford site must be completed outside the bird window associated with nesting season	Tree clearing must be completed between Aug 15 and Jan 30.	The concise work plan has been developed with construction start on the Oxford site in November of 2017. Any delays will only push this construction further away from the bird window.
Fraser Health Authority requires arsenic treatment by December 2018 if arsenic levels increase	December 31, 2018	The concise work plan has been developed to allow for commissioning before December 31, 2018.
Fraser Health Authority requires manganese treatment within one year if deemed by Health Canada to be a health risk	Manganese considered to pose aesthetic risk only, though this is currently under review by Health Canada	The concise work plan has been developed to allow for commissioning before December 31, 2018. Treatment of manganese concentrations within this timeframe will prevent cumulative effects and risk from current concentrations in excess of proposed MAC and aesthetic limits.

f) Other project timeline comments:

9. a) Does the project involve federal owned asset?
No
- If yes, please provide detail:

b) Does the project involve provincial owned asset?
No
- If yes, please provide detail:

c) Has tender on design work been awarded?
No
- If yes, date work started:

d) Has tender on construction work been awarded?
No
- If yes, date work started:

e) Has physical work on construction been started?

No

- If yes, date work started:

f) Does the project involve lands within the Agricultural Land Reserve?
No

C. Financial Details

In addition to the financial information below, a Detailed Cost Estimate template has been provided on the website and is part of your mandatory documents.

10. Cost Estimate Summary
You will be required to fill out and submit the Detailed Cost Estimate template provided on the website. The totals below must match the Detailed Cost Estimate template.

a)	Total Gross Project Costs (Eligible + Ineligible):	$ 14,519,600
b)	Total Ineligible Project Costs:	$ 314,600
c)	Total Eligible Project Costs:	$ 14,205,000
d)	Maximum Grant Amount (Provincial 33% + Federal Share 50%):	$ 11,790,150
e)	Requested Grant Amount (if less than question 10.d):	$

11. Provide detailed list of Other Funding Sources.
Please note: Other federal and/or provincial grants will affect the total grant requested as per stacking limit. See the Program Guide for information on stacking rules.

Other Funding Sources	Amount of Funding
Submitted application for NBCF - SCF (this has not been awarded).	$ s.17
	$
	$
	$

12. If this project involves a partnership, provide the legal name of all partner organizations and describe how they are supporting this project.
This project does not involve a partnership.

13. Indicate how the local share of capital costs have been secured and show evidence of secured funds i.e. audited financial statement, bank statement, etc.
Because the City also applied for a NBCF – SCF Grant and does not know if it will be approved, the 2017 to 2021 Draft Financial Plan assumes that 33% of project costs are funded by the City from long term debt. However, the conceptual design costs are shown to be 100% funded by long term debt because the NBCF – SCF program deems costs incurred prior to grant approval ineligible. This funding model allows the City to proceed with the concept design in advance of grant approvals. If a CWWF Grant is approved, these funding sources will be amended to reflect the eligibility criteria and funding split of this program. If this CWWF grant application is approved for the amount requested, the City does not need electoral ascent for long term borrowing and will start the Loan Authorization Bylaw process after grant awards have been confirmed. Audited Financial Statements are available on the City's website.

14. Will the project require the borrowing of funds?
Yes

- If yes, provide details on borrowing:
The City's share of project costs will be funded from long term debt amortized over 30 years.

15. Who will own the completed project?
The City of White Rock

16. Who will be responsible for operating and maintenance?

The City of White Rock

- Do you have a plan to fund, operate and maintain the asset over its lifecycle?
  Yes
- What are the expected annual operation & maintenance costs of the project [including depreciation]?
  736,000
- How will the operation, maintenance and renewal of this capital project be funded?
  The current plan is to fund the operation, maintenance and renewal of these assets through water user fees and the City's Financial Plan incorporates the funding of the ongoing and capital costs for this project.

17. Do you have council/board resolution authorizing the project to proceed and commit your share of project funding?
    Yes
    - If no, when do you expect to submit the council/board resolution:

18. a) Indicate how the program funding will have an incremental impact on the project (this funding will advance this project by X years or will not go forward without program funding).
    If this project does not receive Federal/Provincial funding, the City will have to wait for other grant funding opportunities and delay the project for several years. This would mean the population would be at risk of ingesting water that exceeds the Maximum Acceptable Concentration (MAC) of arsenic (i.e. does not meet the GCDWQ) for an extended period of time. Additionally, if Health Canada moves ahead with its proposed Manganese MAC of 0.1 mg/L then the community will already be ingesting water that does not meet the new limit. Since the community was formed, water supply has been under the control of private operators. This changed in 2015 when the City acquired the water utility. As a result, this application is a historic milestone for the City because this is the first time it has been able to qualify for grant funding for water infrastructure. The City is looking to senior governments for financial assistance as it cannot finance this major public health initiative alone.

    b) Will this project build to or meet a recognized standard/regulation (Drinking or Wastewater) or Green Building Standard?
    Yes
    - If yes, identify the standard or regulation:
      B.C. Reg. 200/2003 Drinking Water Protection Regulation; and Guidelines for Canadian Drinking Water Quality

19. Eligible Project Costs Forecast - Project cost estimates are based on work completed or goods and services received, and are for all contributions (Provincial, Federal, and Applicant Share):

Eligible Project Costs – work expected to be completed by March 31, 2017	$ 2,302,400
Eligible Project Costs – work expected to be completed by March 31, 2018	$ 11,902,600
Total (must equal Total Eligible Project Costs (Question 10 c.))	$ 14,205,000

20. Asset Management

    a) Do you have a long-term financial plan that exceeds a 5 year horizon (if yes, over how many years)?

    b) How does the financial plan relate to your Asset Management plan, Capital Works plan, OCP, and any other strategic community and corporate plans?
    As the Water Utility/Fund is new for the City, the 2016 to 2020 approved Financial Plan, and draft 2017 to 2021 Financial

Plan both reflect increased annual contributions to the capital infrastructure reserve, and less reliance on debt financing every year, with no debt financing required in the latter years of these plans. This demonstrates the City is progressing towards building up water infrastructure capital reserves over the Financial Plan period. This relates to the City's OCP because Section 7 (Transportation and Infrastructure) of the OCP identifies that the state of water infrastructure impacts human and environmental health as well as real property. It includes a goal that the City will work with EPCOR White Rock Water Inc. (EPCOR) to undertake a logical, sequential, and phased program of water service. Since the preparation of this OCP, the City has purchased the water utility from EPCOR and is now managing the water service program. The 2016 to 2020 approved Financial Plan includes funding to complete a Waterworks Master Plan which will contribute towards the goal of providing a logical, sequential and phased program. This project would be part of this program, providing arsenic and manganese treatment and improving level of service for the residents of the community. The OCP also identifies that ongoing maintenance of existing infrastructure in a strategic and prioritized way is integral to its longevity, this demonstrates that the City is committed to properly managing the infrastructure that will be constructed as part of this project.

c) What proportion (%) of infrastructure replacement are you able to fund through current financial revenues?
0

For the asset class that you are applying for:

d) Do you have an asset inventory/registry – complete? Up to date?
To the best of the City's knowledge (due to the recent acquisition of the utility) the City has nearly completed an asset inventory in GIS based on EPCOR's data, and Master Plan. The City also has received service records from EPCOR for the recently purchased utility and will review and validate these records as part of the 2016/17 Waterworks Master Plan. The City will continue to build on this with completion of the City's Waterworks Master Plan and as further information becomes available. An insurance appraisal was recently conducted for this infrastructure. The asset inventory for financial accounting purposes is based on EPCOR's inventory provided at the time of acquisition, and work is underway to build on this.

e) Condition assessment?
There is limited condition information available about the existing infrastructure, but a framework exists to collect this information moving forward. Also, an analysis of break history was included in the 2013 Water System Master Plan and 2016 Water Conservation Plan. This analysis identified that 92% of the breaks since 2000 were associated with cast iron pipes. A pilot cast iron investigation and condition assessment project is included in the Water Conservation Plan in the list of current and planned conservation measures.

f) An asset management plan? If yes, is the plan linked to a long term financial plan?
As the City recently purchased the utility from EPCOR there is no formal asset management plan for the utility. However, the next step will be to incorporate the utility within the next Water System Master Plan update which will then feed into an asset management plan. Since the New Building Canada Fund application, Staff has collected

information on the assets and is working to develop an asset management plan in 2017.

g) Using the AM BC Roadmap available at www.assetmanagementbc.ca, identify which 'Basic Level' practice modules/building blocks your local government has achieved (for the asset category applied for)?
1.2 Componentized Asset Inventory, 2.1 Current Asset Investment, 2.2 Current O&M Costs, 2.3 Future Capital Costs, 2.4 Funding Sources, 3.1 Evaluate Decision Process, 5.1 Strategic Goals, and 6.1 Sustainability Assessment

h) What effect will the proposed project have on service levels and how will these be measured, e.g. *The water treatment plant upgrade will improve water quality in the community – Measured by the reduction in the number of boil water advisories, and improved levels of disinfection residuals and or by the number of residents with improved water quality and/or meet a provincial/federal standard.*
The proposed project will allow the City to consistently provide drinking water that meets the GCDWQ including aesthetic and proposed maximum acceptable concentration (MAC) limits for manganese and assurance that drinking water will consistently remain below the arsenic MAC. The City will continue to regulate and report on drinking water quality regularly as per conditions of their Fraser Health Operating Permit.

D. Project Objectives and Benefits

Increased capacity or lifespan of the asset (economic growth), improved environmental outcomes (cleaner environment) and enhanced service (building stronger communities).

21. a) Will this project increase capacity or lifespan of the asset?
No

- If yes, please explain:

b) Will this project result in enhanced services?
Yes

- If yes, please explain:
If this project is completed, the population of the City of White Rock, 85 metered connections in Surrey (~200 people) and the Semiahmoo First Nation (~50 people on reserve) and 260 commercial & institutional connections will receive enhanced services by having access to drinking water that consistently meets the GCDWQ. Arsenic concentrations have occasionally exceeded GCDWQ MAC limits. In addition to arsenic, the City's water has elevated levels of Manganese which exceed the proposed GCDWQ MAC of 0.1mg/L and aesthetic limit of 0.05mg/L. Epidemiological studies have suggested that drinking water with manganese concentrations above the proposed MAC can lead to neurological effects in children. Above the aesthetic objective manganese can affect the taste, smell and/or colour of the water and the water can stain plumbing fixtures and laundry. The majority of the City's wells are above the proposed MAC. The proposed water treatment infrastructure will treat for arsenic and manganese.

c) Will this project result in improved environmental outcomes?
Yes

- If yes, elaborate in question 22 below.

Economic growth

22. a) Describe the economic benefits of the project and how the project improves economic growth in the community.

As mentioned in the Economic Development Strategic Plan, local utilities and infrastructure are part of a foundation required for economic growth. The the proposed project forms part of these local utilities and the improved drinking water has the potential to attract businesses into the area. As recommended by the Fraser Health Authority, the project will include a community outreach and education program which will bring the community together, improve their awareness of the value of water and its impact on public health.

b) Do you have an economic development plan?
Yes

- If yes, when was it updated?
01/05/2009

Cleaner environment

c) Describe the environmental benefits and contribution of the project (e.g. reduced resource consumption, reduction in greenhouse gas emissions, etc.):
The project will protect the environment by ensuring that all chemicals are managed by trained operators and waste products are managed using best practices. The project also incorporates several measures aimed at minimizing the net increase in GHG emissions over the life cycle of the infrastructure. The treatment process that will be used will rely on pressure filters, which have a smaller footprint than gravity filters, resulting in a smaller overall plant footprint. This smaller plant footprint reduces the number of trees that must be removed for construction at one of the sites, and also reduces quantities for earthworks and construction materials, and heating and lighting loads in operation.

d) Describe any energy efficient features included in this project.
The City of White Rock is committed to protecting and preserving the environment, the City intends to complete the detailed design and construction of the facilities for the Arsenic and Manganese Water Treatment Project to achieve a high level of energy efficiency exceeding the National Energy Code of Canada for Buildings (NECB) standard.

e) Do you have a council endorsed water conservation plan?
Yes

- If yes, when was it last updated:
01/04/2016

f) Does the project consider climate related risks, and if so what adaptation/mitigation measures will be taken?
The City of White Rock is coastal and will be impacted by sea level rise. Both water treatment plants (or the single plant at the Oxford site) will be located at least 660 m from the shore at an elevation of at least 80m above sea level.

Stronger communities

g) Describe how this project will advance the long-term goals and vision of the community as identified in applicable community plans.
This project will advance the long-term goals and vision of the community as outlined in the City's Official Community Plan (OCP) because it represents efforts to undertake a logical, sequential, and phased program of water service. The plan also identifies that ongoing maintenance of existing infrastructure in a strategic and prioritized way is integral to its longevity, this demonstrates that the City is committed

to properly managing the infrastructure that will be constructed as part of this project.

h) Will this project increase capacity, and/or enhance service, and/or improve environmental outcomes. (A project may do one or all three, please briefly describe which your project does and how.)

The project will enhance services and improve the health of the community by supplying water that consistently meets the GCDWQ and complies with the Drinking Water Protection Act and Regulation. From a public health perspective - properly treated water will minimize cancer risks associated with the consumption of water with arsenic levels at or below the Health Canada MAC limit of 0.1 mg/L. Additionally, removal of manganese will protect the most sensitive members of the population against potential health impacts, and reduce consumer complaints regarding discoloured water and staining of laundry. The project will also minimize the impact to the environment by achieving a high level of efficiency for the WTP building(s) and ensuring that all chemicals are managed by trained operators and waste products are managed using best practices.

E. Environmental Assessment and Aboriginal Consultation

23.	Is any part of the project located on federal lands? No
24.	Will aboriginal groups be consulted about the project? No, the City owns both project sites. The Semiahamoo First Nation fall entirely within the municipal boundaries of the City of Surrey. They also do not have a protocol or formal binding agreement with the City of White Rock or the City of Surrey.
25.	Is the project subject to an environmental assessment? No. Environmental assessments have already been completed for the two proposed sites.

F. Mandatory and Supporting Documents

All mandatory documentation* is to be emailed or mailed to: Please include your project number.

Ministry of Community, Sport and Cultural Development
PO Box 9838 Stn Prov Govt
4th Floor 800 Johnson St.
Victoria, BC V8W 9T1
Phone: 250-387-4060
Email: infra@gov.bc.ca

** Please see the Program Guide for a list of documentation.*

Clean Water and Wastewater Fund Support Documents

Status of licenses/permits/approvals

Clean Water and Wastewater Fund

Arsenic and Manganese Water Treatment Project

Required Permits & Approvals List

PERMIT/APPROVAL	APPROVING BODY	STATUS
Health Permit	Fraser Health Authority	Not started
Application for new service	BC Hydro	Not started
Application for Operating Permit	Fraser Health Authority	Not started

Clean Water and Wastewater Fund Support Documents

Certification Form

BRITISH COLUMBIA

Canada

CLEAN WATER AND WASTEWATER CERTIFICATION FORM

To complete the application process you must complete, print, sign and mail or e-mail this Certification Form.

Applicants should be aware that information collected is subject to provincial freedom of information legislation.

For Administrative Use Only

Applicant Certification

I/we certify that the information contained in the Application Form for the Arsenic and Manganese Water Treatment Project (Application # 13), submitted on November 23, 2016, is to the best of my/our knowledge, correct and complete and has been submitted with council/board concurrence, as authorized by a resolution dated November 7, 2016.

Project Manager Signature:
(e.g. Engineer, Planner)

Date: November 23, 2016

Name: Greg St. Louis

Title: Director, Engineering & Municipal Operations, City of White Rock

Financial Officer Signature:

Date: November 23, 2016

Name: Sandra Kurylo

Title: Director, Financial Services, City of White Rock

Please mail or e-mail the signed Certification Form to:

Ministry of Community, Sport and Cultural Development
PO Box 9838 Stn Prov Govt
4th Floor 800 Johnson St.
Victoria, BC V8W 9T1
Phone: 250-387-4060
Email: infra@gov.bc.ca

Clean Water and Wastewater Fund Support Documents

Detailed Cost Estimate

Clean Water and Wastewater Fund
Detailed Cost Estimate

Applicant Name: The Corporation of the City of White Rock
Project Number: 13 (Application Number)
Project Title: Arsenic and Manganese Water Treatment Project
Project Category: Water
Cost Estimate Developed By: Kerr Wood Leidal Associates
Date of Cost Estimate (DD-MM-YYYY): 21-10-2016
Cost Estimate Class: D

ELIGIBLE COSTS				
	Description	**Quantity**	**Per Unit Amount**	**Total Cost**
Construction / Materials				
Items should reflect the major components in your project without going into specific detail, add lines as necessary	General Requirements		s.17	
	Raw water supply line from wells to treatment plant			
	Treatment Plant 1 (Merklin)			
	Allowance for site work and yard piping			
	Allowance for landscaping			
	Pressure filters			
	Chemical feed systems (sodium hypochlorite)			
	Chemical feed systems (Ferric Chloride)			
	Chemical feed systems (polymer)			
	Allowance for pH adjustment system			
	Piping and valving			
	Compressor			
	Backwash gravity thickener pumps & piping			
	Electrical, instrumentation and controls			
	Allowance for backup power			
	Gravity thickener tank			
	Building for plant # 2			
	Allowance for building HVAC systems			
	Allowance for furniture			
	Treatment Plant 2 (Oxford)			
	Allowance for site work and yard piping			
	Allowance for landscaping			
	Pressure filters			
	Chemical feed systems (sodium hypochlorite)			
	Chemical feed systems (Ferric Chloride)			
	Chemical feed systems (polymer)			
	Allowance for pH adjustment system			
	Piping and valving			
	Compressors			
	Centrifuge			
	Backwash gravity thickener equipment			
	Electrical, instrumentation and controls			
	Allowance for backup power			
	Gravity thickener tankage			
	Building (Wood Frame)			
	Allowance for building HVAC systems			
	Allowance for lab equipment and furniture			
	Chlorination of Well #4			
			Construction / Materials Sub-Total:	
Design / Engineering				
If your project is a planning/study project enter cost here	Value Engineering			
(Note max 15% of construction project costs can be engineering/consulting fees)	Engineering			
			Design / Engineering Sub-Total:	
Environmental Assessment				
	N/A (Already Completed)			
			Environmental Assessment Sub-Total:	
Other Eligible Costs				
For example (communications, surveying, testing, Aboriginal Consultation)	Public Consultation and Education			
			Other Eligible Costs Sub-Total:	
Contingency				
	Contingency (30%)			
			Contingency Sub-Total:	
			TOTAL ELIGIBLE COSTS*:	

INELIGIBLE COSTS		
	Description	**Qu**
Land Acquisition Cost	N/A	
Leasing Land, Building and Other Facilities	N/A	
Financing Charges		
Legal Fees	N/A	
In-kind Contribution		
Tax Rebate	N/A	
Other	KWL Application Support Fees	
	TOTAL INELIGIBLE COSTS*:	

TOTAL GROSS PROJECT COSTS (Eligible + Ineligible)*:

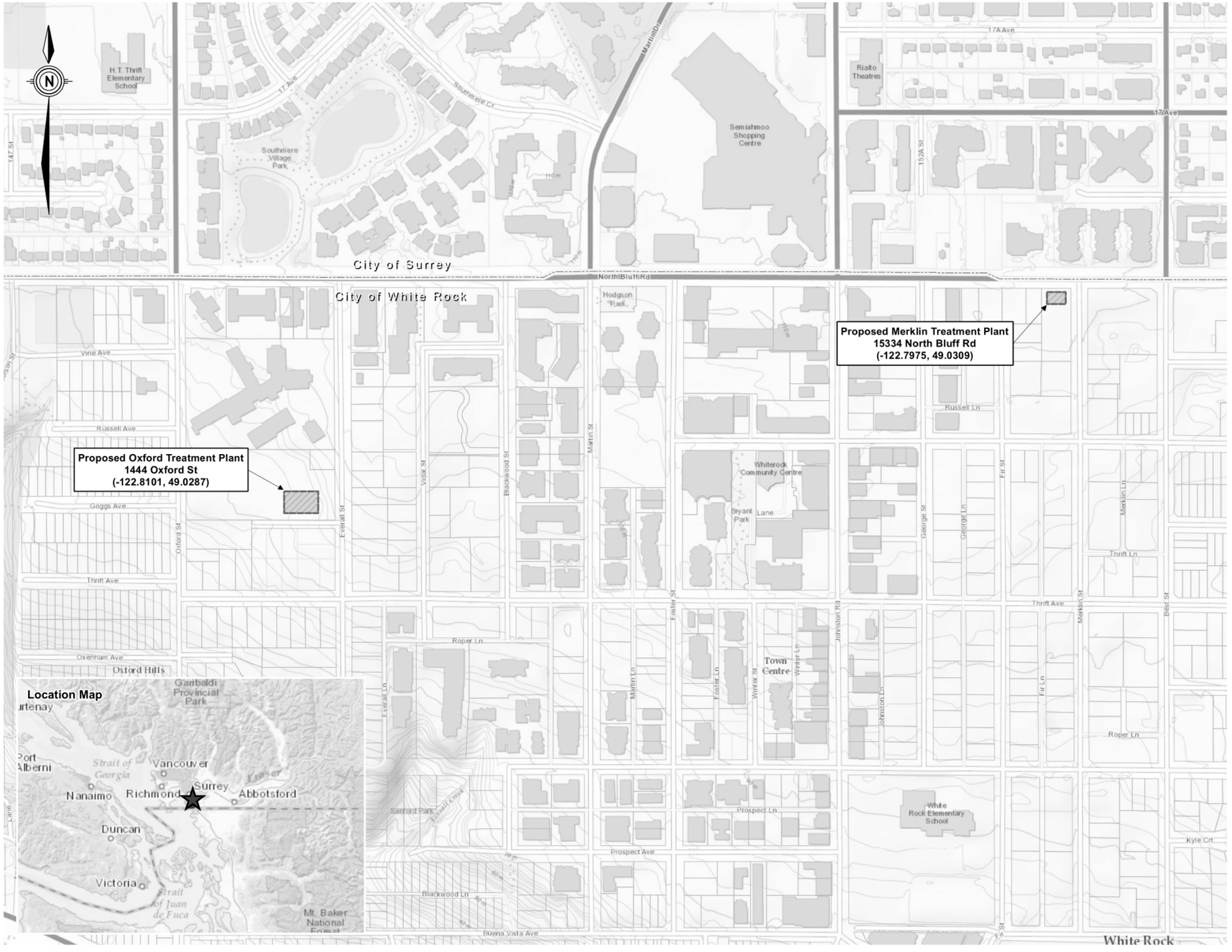
***Totals must match Section 10 of the Application Form.**

Cost Estimate Comments

These estimates are a reflection of the expected capital cost and operating costs for budgeting purposes only. These have been based on the estimates provided in the 2011 Stantec Report entitled "White Rock Total Water Quality Management Design Report" .
The City of White Rock will update their 2016 - 2020 Financial Plan to reflect this revised estimate.

Clean Water and Wastewater Fund Support Documents

Site Plan



The Corporation of the City of White Rock

Legend

- Municipal Boundary
- Proposed Water Treatment Plant

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

KERR WOOD LEIDAL
consulting engineers

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(m)

Project No.	Date
452-110	November 2016

Arsenic and Manganese Water Treatment Project Site Plan

Figure 1

Path: O:\0400-04991452-110\430-GIS\MXD-Wk\452110_SitePlan.mxd Date Saved: 11/3/2016 11:04:06 AM
Author: TSoh

Clean Water and Wastewater Fund Support Documents

Council Resolution

CERTIFIED RESOLUTION

The City of White Rock Council at their November 7, 2016 Regular Council meeting adopted the following resolution:

5.2.2 CLEAN WATER AND WASTEWATER FUND APPLICATION FOR ARSENIC AND MANGANESE WATER TREATMENT PROJECT

It was MOVED and SECONDED
THAT Council

1. Receives for information the corporate report dated, November 7, 2016 from the Director of Engineering and Municipal Operations titled, "Clean Water and Wastewater Fund Application for Arsenic and Manganese Water Treatment Project";
2. Approves submitting the grant application to the Clean Water and Wastewater Fund for arsenic and manganese removal for the White Rock Water System;
3 Commits to the City's share of $2,414,850 of the project costs;
4. Acknowledges that the Arsenic and Manganese Water Treatment Project could not proceed without program funding; and
5. Acknowledges that the full scope of the Arsenic and Manganese Water Treatment Project would not otherwise have been undertaken without program funding in fiscal years 2017 - 2018.

CARRIED

Tracey Arthur, City Clerk

Dated November 8/16

City Clerk's Office
P: 604.541.2212 | F: 604.541.9348

City of White Rock
15322 Buena Vista Avenue, White Rock BC, Canada V4B 1Y6

WHITE ROCK
My City by the Sea!

www.whiterockcity.ca

Clean Water and Wastewater Fund Support Documents

Permit to Operate

fraserhealth HEALTH PROTECTION

PERMIT
TO OPERATE

A Drinking Water System with
301-10000 Connections

Water Supplier: City of White Rock Water System
Facility Name: City of White Rock WS

Conditions of Permit

1. On or before February 1, 2017, the drinking water that you provide must be treated to provide an acceptable secondary disinfectant to the whole system that meets the requirements of the Guidelines for Canadian Drinking Water Quality and acceptable to Fraser Health Authority. As an interim measure, the addition of chlorine at wells #6 and #7 must continue until the above work has been completed in 2016.

2. Should arsenic levels exceed the Guidelines for Canadian Drinking Water Quality, the City must start operating a treatment system on or before December 31, 2018 to lower the arsenic level below the Guideline limit and to as low as reasonably achievable. Treatment requirements will be based on the results of the "Sampling and Reporting Protocol for the City of White Rock Water System, October 29, 2015."

3. Should the Guidelines for Canadian Drinking Water Quality deem manganese a health criteria, a treatment system must be operational one year after the date of the changes to the Guideline limits.

4. A written update on the status of your plan to meet these conditions shall be submitted to Fraser Health Authority by March 31st of each calendar year.

WHITE ROCK
My City by the Sea!

Clean Water and Wastewater Fund Support Documents

Letters of Support

fraserhealth Better health. Best in health care.

November 10, 2016

City of White Rock
15322 Buena Vista Avenue
White Rock, BC V4B 1Y6

Attention: Greg St. Louis, Peng

Dear Mr. St. Louis:

Re: Letter of Support for New Clean Water Wastewater Fund

Further to our April 20, 2016 letter of support, Fraser Health supports the City of White Rock's latest application for infrastructure funding under the recently announced cost-shared Federal/Provincial/Municipal "Clean Water Wastewater Fund" initiative.

As indicated in our previous letter, Fraser Health supports the City's efforts to design and install treatment to reduce the existing arsenic and manganese levels in its water supply. The levels of arsenic reported by the City are occasional temporary exceedances above Health Canada's maximum acceptable concentration. There also are exceedances of manganese above Health Canada's guideline.

We support the City's efforts to promote public health and water quality protection and envision that the needed funding for enhanced treatment will positively affect all community members for years to come and reduce any potential health effects to the City's residents.

Sincerely,

Dr. Arlene King, MD, MHSc, FRCPC, ICD.D
Medical Health Officer

Fraser Health Authority
Population & Public Health

400 - 13450 102nd Avenue
Surrey BC
V3T 0H1 Canada

Tel (604) 930-5404
Fax (604) 930-5414
www.fraserhealth.ca

DIANNE WATTS, LL.D., M.P.
SOUTH SURREY–WHITE ROCK

November 9, 2016

TO WHOM IT MAY CONCERN:

RE: THE CANADA – BRITISH COLUMBIA CLEAN WATER WASTEWATER FUND - APPLICATION FROM CITY OF WHITE ROCK

I would like to provide this letter as support for the City of White Rock's grant application for a proposed water treatment plant - design and construction, under the Canada – British Columbia Clean Water Wastewater Fund.

This treatment plant will reduce the level of manganese and arsenic in the City of White Rock's drinking water to a level within the Canadian Guidelines for Drinking Water Quality.

The proposed project will benefit our community by building infrastructure that will allow for a sustainable supply of clean, safe drinking water.

Kind regards,

Dianne Watts
Member of Parliament
South Surrey – White Rock

Parliamentary Office
Room 184, Confederation Bldg.
House of Commons
Ottawa, ON K1A 0A6
Tel.: (613) 947-4497
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Surrey, BC V4A 2H9
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E-mail: Dianne.Watts@parl.gc.ca

Province of British Columbia
Legislative Assembly

Gordon Hogg, M.L.A.
Surrey - White Rock

Constituency Office:
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November 16, 2016

Infrastructure Canada
Clean Water and Waste Management Fund

RE: Letter of Support for the City of White Rock Water Treatment Plant

To Whom It May Concern;

I write in support of the City of White Rock's grant application from the Clean Water and Waste Management Fund.

Federal and provincial funding is an essential component of the City of White Rock's plan to build a new arsenic and manganese treatment plant. This project will benefit our community by building the infrastructure that will allow for a sustainable supply of clean, safe drinking water that meets the Fraser Health Authority (FHA) and Canadian guidelines..

The City of White Rock has continually shown that they are responsive to the fiscal demands of a small community and I fully support this grant and the proposed project.

Please do not hesitate to contact me should you require additional information or clarification.

Thank you for your consideration,

Gordon J. Hogg, MLA
Surrey-White Rock