

SCHEDULE F – PROJECT COMPLETION REPORT TEMPLATE

VERY IMPORTANT:

Timing: You need to email a report, to your GMF project officer (contact info is in Schedule C), on the dates indicated in Schedule C or whenever FCM asks for such a report.

Copyright: Before you submit a report to FCM, make sure you hold the copyright for the report. If you're hiring a consultant to prepare the report, please make sure to get the copyright (see FCM's copyright tips document), or else FCM will not be able to disburse the Grant Amount.

Accessibility for people with disabilities: Please do not change the format, font, layout, etc. of this report. This template has been specially designed, following FCM's Accessibility Guidelines, in order to be accessible to people with disabilities.

Confidentiality: If your report contains any Confidential Information that you would prefer not be made available to the public (e.g. through a case study or other materials produced by FCM that relate to your Project), please submit two versions of the report:

- 1. Complete report including Confidential Information:** Please clearly label this report with the word "**Confidential**" or similar wording and FCM will treat it as confidential.
- 2. Abridged report excluding Confidential Information:** This report may be posted on the FCM website and otherwise made available to interested third parties, to help FCM meet its knowledge sharing objectives.

Please contact your project officer to receive an electronic copy of the Completion Report Template.

Upon completion of the project, a copy of the Final Deliverable must be submitted along with this Completion Report.

FCM will post your report on the [Green Municipal Fund™ \(GMF\) website](#). This is because one of FCM's mandates is to help municipal governments share their knowledge and expertise regarding municipal environmental projects, plans and studies.

How to complete the Completion Report

The purpose of the Completion Report is to share the story of your community's experience in undertaking your project with others seeking to address similar issues in their own communities.

Please write the report in plain language that can be understood by people who are not specialists on the subject. A Completion Report is typically in the range of 5–10 pages, but may be longer or shorter, depending on the complexity of the project.

GMF grant recipients must enclose **final** copies of the Completion Report and the Final Deliverable with their final Request for Contribution. The reports, including all attachments and appendices, must be submitted in PDF format with searchable text functionality. Reports that are not clearly identifiable as final reports, such as those displaying headers, footers, titles or watermarks containing terms like "draft" or "for internal use only," will not be accepted by GMF. Additionally, reports must be dated. If you have questions about completing this report, please consult GMF staff.

GMF number	16776
Name of lead applicant (municipality or other partner)	Corporation of the District of Summerland
Name, title, full address, phone, fax and e-mail address of lead technical contact for this study	Odessa Cohen, Sustainability and Alternative Energy Coordinator, 250-404-4068, climate.action@summerland.ca/ocohen@summerland.ca
Date of the report	February 28 th 2022 (Revised from February 11 2022)

1. Introduction

- a) Who was involved in doing the Feasibility Study, and what are their affiliations? Please include name, title and contact information. Those involved could include municipal staff, engineers and other consultants, a representative from a non-governmental organization, and others.

The reports that have been submitted to date include the Phase 1&2 preliminary site investigation (PSI) and Geotechnical investigation report. In addition, a hazardous materials and risk assessment report was also completed based on the findings of the Phase 1 and 2 PSI reports.

These were prepared by WSP, project manager Jason Newington, Kim MacRae, and staff from the District of Summerland included Tami Rothery (no longer with the District), who was the project lead.

2. The Feasibility Study

- a) Describe the process that you undertook to make this feasibility study a reality, from concept, to council approval, to RFP, to final deliverable.

In May 2017 the District applied for a grant through the Federal gas tax fund, which provides funding for the engineering, procurement and construction of a solar project. Following the successful award of the grant in 2018, a site for the development was chosen, which is on a brownfield site (previously used by the District Works department). This site location provided the opportunity to qualify for the application of the Brownfield site GMF grant.

The GMF grant was applied for to assist in fees and costs related to a site analysis to determine site suitability, and clean-up of the brownfield site. The GMF grant provided support to fund two important studies, the Phase 2 PSI and a Geotechnical report to assist with understanding site suitability for the future solar panel project.

In addition to these two studies, a planned remedial action and risk management plan was proposed, but since the hazardous materials found on site were more minimal than originally anticipated, the requirement of a full remedial action and risk management plan was not needed. Instead the development of a hazardous materials risk assessment was done providing guidance for site clean-up, which was later completed.

- b) What were the objectives of the Feasibility Study (what was it seeking to determine)?

The intent of the Phase 2 PSI, Geotechnical, and risk assessment, was to determine site suitability for the future solar panel project based on water and soil conditions, and analysis of possible site contamination. These two reports were then to be used to provide necessary information to include in a full redevelopment plan.

The Phase 2 preliminary site investigation (PSI) assessed the presence or absence of soil and or groundwater impacts and to identify any potential need to assess for soil vapour impacts on the site based on the Phase 1 report findings. The geotechnical report provided a preliminary site assessment based on soil, slopes and groundwater conditions at the proposed solar project site area.

c) What approach (or methodology) was used in the Feasibility Study to meet these objectives?

To determine the site suitability for the solar panel project, the Phase 1 and 2 PSI reports used soil and groundwater analysis through boreholes, surficial soil collection, and groundwater monitoring to understand the extent of possible soil and water contamination. The Geotechnical Report looked at soil structures, groundwater conditions, and slope on the proposed site providing a preliminary assessment of site suitability. The hazardous materials and risk assessment provided guidance on how to safely clear the site of identified asbestos containing materials, and how to mitigate risk.

d) Please describe any public consultations conducted as part of the Feasibility Study and their impact on the Study.

None were conducted.

3. Feasibility Study Findings and Recommendations

a) What were the environmental findings related to the options explored in the Feasibility Study? Please provide quantitative results and summary tables of these results (or the page numbers from the Feasibility Study report).

Phase 2 PSI report:

- Detected metals and salinity in the borehole soil samples were below BC Site regulations land use standards
- The soil analysis showed no potential contaminants of concern associated with previous use of the site for public works and storage.
- Concentrations of select metals and petroleum and hydrocarbons were detected, but well below standards
- Surficial soil samples showed no impact of potential contaminants of concern from the former use of the site.
- Hazardous materials identified included, asbestos in pipe samples, cement pipes, and metal pipes, as well as crystalline silica in the remnant concrete structures.

Geotechnical Report

- Soil type found at the site (surficial fills and granular and fine grained soils) would resist liquefaction during a seismic event
- Site Class D is recommended for site design based on soil conditions for seismic activity
- Negligible degree of exposure to sulfate attack on concrete with the site soils
- While groundwater was not encountered at test holes, seepage is expected with seasonal precipitation. Foundations should direct surface water away from foundations.
- On-site stormwater could be considered based on soil type, and variable soil permeability

*Summary results can be found in the appendices of the Geotechnical report starting on **page 23**.*

b) What were the financial findings related to the options explored in the Feasibility Study (for example, results of a cost-benefit analysis, financial savings identified, and so on)? Please provide quantitative results and summary tables of these results (or the page numbers from the Feasibility Study report).

No financial analysis was provided in the reports.

- c) Based on the environmental and financial findings above, what does the Feasibility Study recommend?

The recommendations from the Phase 2 and Geotechnical report are summarized below:

The **phase 2 PSI** recommended:

- further groundwater monitoring (the wells were unable to produce viable volume to assess),
- decommissioning of the monitoring wells if they are no longer in use.
- if any site contamination is found during construction a qualified professional should be contacted.
- All asbestos materials must be removed and a risk assessment for asbestos be performed prior to beginning the removal.
- If redevelopment or rezoning takes place on the site, a Ministry legal instrument is required
- A risk assessment for asbestos should be conducted prior to work
- Qualified professional should be notified if asbestos containing materials not identified in the report are found.

The **Geotechnical report** provided a number of construction recommendations that are technical in nature, they are summarized below:

- Pile driving depth and fitting
- Uncontrolled, unsuitable or deleterious materials need to be stripped from proposed foundation footprints, specific equipment use to reduce subgrade disturbance, and construction traffic diverted from construction footprints
- Temporary excavation parameters for ground disturbance
- Surface and groundwater management is advised during construction to ensure it is carried out in dry conditions
- Permanent cut and fill slope ratios are provided
- A minimum setback of 3m from the crest of slopes, and 3m setback from forests to toe of slopes
- Recommendations for type of engineered fill to be used
- Winter and wet weather construction recommendations including keeping subgrade surfaces frost free, keeping fill free of snow, ice and other deleterious materials, placing fill on surfaces that are free of standing water.

The geotechnical preliminary report concluded that the site was suitable to support the proposed solar project based on soil and groundwater conditions, and conditions of the slope.

4. Lead Applicant's Next Steps

- a) Taking the Feasibility Study's recommendations into account, what next steps do you as the municipality plan to take? What potential benefits or internal municipal improvements would result from these next steps?

Due to changes in the project that require a new RFP to address altered scope reduction, the next steps will be to move forward with a new RFP and get the new contractor to provide a final redevelopment plan for the project outside of the grant timeline, and construct the solar panel project.

Internally, the potential municipal improvements include having a site ready for the solar project developed. The Solar project will provide another source of energy for the District and residents, diversifying and increasing resilience of our existing electrical grid. The development of the solar panel project will also provide a multitude of benefits to the community, such as education of large scale solar projects and technology, continued maintenance and use of the local trail network that surrounds the solar panel site, improving recreational opportunities, social development, and health and well-being.

5. Lessons Learned

In answering the questions in this section, please consider all aspects of undertaking the Study — from the initial planning through each essential task until the Final Study was prepared.

- a) What would you recommend to other municipalities interested in doing a similar Feasibility Study? What would you do differently if you were to do this again?

Ensure that terms related to copyright of reports are spelled out clearly, in our favour, in the initial contract. Use of third party industry experts to assist with scope of work and understanding technical questions and requirements of the studies. Having a qualified consultant assist us with developing the scope of work for our RFP and be part of the evaluation team was invaluable and well worth the extra time and cost. Would highly recommend this approach.

Additionally, combining the geotechnical and PSI phases helped to realize major cost savings for the project overall.

- b) What barriers or challenges (if any) did you encounter in doing this Feasibility Study? How did you overcome them?

Barriers: A site design was to be provided showing the site for redevelopment, taking into account the geotechnical considerations discovered through Milestone 3 (Phase 1&2 PSI and geotechnical report), as well as environmental considerations outlined in reporting done outside of the FCM funded reports. This was not completed due to changes in scope of the solar project itself, which resulted in the original vendor (for development of the site determined through a different external process) being redacted. As such, only the preliminary site design, from ATCO, was available for submission and considered in costs.

Challenges: Timelines for deliverables had to be adjusted based on review of the documents, and the contractors providing the deliverables in a timely manner. This pushed the project deadline a year behind. Overcoming this delay was done through timeline extensions with FCM/GMF to ensure deliverables were able to be received on time.

Change in staff; the original project manager for the grant left the district and several months in between their leave and the new staff member delayed the Milestone 5 submission. This was overcome by requesting a due date extension to assist in getting all the information together while on the new job. Contacting the old project manager also provided insight into file details and history.

6. Knowledge Sharing

- a) Is there a website where more information about the Feasibility Study can be found? If so, please provide the relevant URL.

The document is currently linked on the Districts website: <https://www.summerland.ca/your-city-hall/climate-action/integrated-solar-project?pname=Integrated%20Solar%20Project>

- b) In addition to the Feasibility Study results, has your Feasibility Study led to other activities that could be of interest to another municipality (for example, a new policy for sustainable community development, a series of model by-laws, the design of a new operating practice, a manual on public consultation or a measurement tool to assess progress in moving toward greater sustainability)? If so, please list these outcomes, and include copies of the relevant documents (or website links).

The overarching solar panel project has resulted in Council to direct District staff to begin preliminary studies and engagement for a new residential development. The intent is to develop an eco-village on lands adjacent to the Solar Panel project for primarily single family and multi-family dwellings, and a community hub/education centre that highlights the village and solar panels.

Project details here: <https://www.summerland.ca/planning-building/planning-development/current-projects/eco-village-concept-plan>

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This project was carried out with assistance from the Green Municipal Fund, a Fund financed by the Government of Canada and administered by the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them.