Canadian Hydrographer Certification Panel

Project Report – Submission Guidelines

As a partial fulfillment towards obtaining certification as a Certified Hydrographer or Certified Hydrographic Technician, the candidate is required to submit a satisfactory Project Report to the Canadian Hydrographic Certification Panel (CHCP). The purpose of the Project Report is to allow the CHCP to validate the candidate's management experience in hydrographic or offshore surveying at a responsible and professional level as well as their ability to communicate in writing.

The goal of the Project Report is to test the candidate's knowledge on specific aspects of hydrographic or offshore surveying including but not limited to the following:

- General presentation
- Project outcomes, conclusions and recommendations
- Project critical analysis
- Hydrographic or offshore survey procedures / equipment / methodologies
- Planning and logistics including mobilization and survey equipment installation
- Safety
- Project execution
- Data collection and reduction including quality control
- Charting, plans and sketches preparation (if applicable)
- Final report and project management

This document provides guidelines for the candidate as to what constitutes an acceptable project, the required level of involvement by the candidate, and general project report requirements. It is highly recommended that the candidate structure the project report in accordance with these guidelines. Candidates have the flexibility to select a project that represents hydrographic or offshore surveys commonly performed by the candidate.

The subject of the proposed Project Report **MUST** be approved by the CHCP before the Project Report is submitted. The project must be of at least four (4) weeks duration [longer is preferred] and must have been completed within the last five (5) years. Please submit a completed CHCP Project Report – Approval Request form. There **should** be a CHCP – Hydrographic and Offshore Surveyor Experience Logbook entry associated with the selected project.

The project must be related to hydrographic or offshore surveying and be of such a nature, extent and level of complexity as to demonstrate clearly the competence and judgment required of a professional hydrographic or offshore surveyor including project management skills. It is preferred

that the survey project be performed under the supervision of a practicing professional surveyor or engineer, or experienced manager as part of the candidate's regular employment duties. For consultants and freelance personnel, the CHCP expects the candidate to provide evidence of peer review of their work.

Invariably the on water work would be executed by a team of which the candidate would be a senior member. The candidate will demonstrate in the Project Report the level of their involvement in the planning, execution and reporting required in the chosen project. Any chart(s), plan(s) and sketch(es) provided in the Project Report should ideally be created by the candidate, though if that is not possible, should at least be thoroughly reviewed by the candidate and prepared under the candidate's instruction.

The Project Report shall provide a critical review of the project to identify improvements in safety, procedures, execution and final deliverables. The Project Report should not just be a historical account of the project but provide critical analysis which demonstrates good judgement and an understanding of the project survey requirements as well as any short comings (perceived or realized) in the project documentation, planning or execution.

The candidate would be responsible for providing any correspondence with other interested companies, government agencies and the client, as well as any relevant data and document releases required.

It is understood that each project is different and all elements may not be covered in the listing below. The CHCP would prefer that the candidate followed the general layout below to allow for efficient review of the various Project Reports submitted. Note that the Project Report would not just be the same report as provided to the client, as the CHCP requirements have a different objective.

The written portion of the Project Report should be presented in a professional style and should be clear and concise. The report should be submitted in PDF format. Although point values are identified by task, the report should be prepared in a narrative format in the past tense and should read as a professional report.

Extraneous information **shall** be included in the Appendices which shall be provided in a logical layout such as safety information; project timing information; working files related to the Project Report; equipment descriptions and specification sheets; charts, plans and sketches; and other pertinent information.

The digital information provided in the Appendices shall be easily readable and laid out in a clear manner. Should certain files require specialized software readers then the candidate shall provide the necessary software or an appropriate internet link to those software readers, to allow the files to be opened and examined by the CHCP. For example, if a CARIS based document is provided then an internet link to a CARIS Easy View reader should be included in the Project Report covering letter or at a suitable location within the Project Report. If the candidate does not provide adequate internet links or working software, then their submission could be seriously delayed or rejected.

Photos and portions of charts, plans or sketches may be included in the written portion of the Project Report where appropriate and essential. As an alternative, the candidate is permitted to follow the latest International Hydrographic Organization, Manual on Hydrography (IHO C-13) standard as detailed at the end of this document.

Remember:

- Be concise – avoid repetition, waffle, padding and inclusion of extracts from equipment manuals.
- Be consistent – ensure that the report is written in the third person in the past tense and that spellings of the same word are kept the same throughout.
- When adding additional sections and sub-sections then do not go beyond the third level for section headings (i.e. 1.1.1) unless it is absolutely unavoidable.
- The items contained within the Appendices should be referenced in the main body of the report and should appear in the same order in the Appendices as the text reference.

Marking Scheme

The following marking scheme generally outlines the items upon which the candidates will be evaluated. This marking scheme is based on the ACLS Project Report requirements updated for hydrographic and offshore surveys. Major differences should be explained in the covering letter submitted with the Project Report.

General Presentation

Task	Description	Point Value
1	General appearance of the Project Report including professional layout, table of contents, and layout of appendices	
2	Adherence to best practice principles of writing and grammar	
3	The logical flow of the Project Report	
4	Structure and relevant use of tables, illustrations and images	
Total		**4**

Project Outcomes, Conclusions and Recommendations

Task	Description	Point Value
1	Brief summary of project outcomes, which may include client expectations, scope of work, budget issues, etc. (No more than 2 pages.)	
2	Executive summary containing a tabular listing vessel, equipment, survey parameters, survey offsets, critical personnel, etc. (No more than 5 pages.)	
3	Conclusions and recommendations. (No more than 2 pages.)	
4	Project summary and historical description of the project and the associated survey. (No more than 5 pages.)	
5	Analysis of project effectiveness via timing analysis, etc. (No more than 3 pages.)	
6	List any changes to the scope of work during the course of the project with reasoning.	
7	Listing of final chart(s), plan(s) and/or sketch(es) prepared as a result of the survey that are included in the Appendices.	
Total		**10**

Project Critical Analysis

Task	Description	Point Value
1	What were the deficiencies in the project documentation, and how would the candidate improve the documentation for a future similar project? The candidate has to look at the documentation objectively and discuss whatever issues arise. Did the documentation thoroughly and clearly cover all eventualities?	
3	What were the deficiencies in the project planning, and how would the candidate improve the execution for a future similar project?	
3	What were the deficiencies in the project execution, and how would the candidate improve the execution for a future similar project?	
4	Discuss the candidate's assessment of the value the client received for the project budget outlay and if that value could have been improved. For example as follows: Were all the objectives of the survey achieved? If the client spent $ then the benefit to future work would have been $$$? If the client focused solely on price, what was the effect on data quality, efficiency and performance?	
5	What did the candidate learn from the project?	
Total		**20**

Note: Although some of these items may be subjective, it is the candidate's role for this Project Report to provide the analysis and present the information to support the candidate's opinions.

Hydrographic or Offshore Survey Procedures / Equipment / Methodologies

Task	Description	Point Value
1	What were the objectives of the hydrographic or offshore survey?	
2	What were the required accuracies and the relationship with current IHO Survey Order standards?	
3	Summary and evaluation of survey and engineering information to achieve the desired results including any pre-calculations done to prepare for the hydrographic or offshore survey.	
4	What survey equipment and methodology was decided upon for the project and why?	
5	What hydrographic or offshore survey standards were followed?	
6	What special instructions were received from the client including any survey contract provided by the client?	
Total		**10**

Planning, Logistics, Mobilization and Survey Equipment Installation

Task	Description	Point Value
1	Describe the survey planning required including relevant documents.	
2	Describe the level of liaison with other interested companies and government organizations where applicable.	
3	Discuss the survey procedures used and any changes required to achieve the project objectives.	

Task	Description	Point Value
4	Describe the logistics involved for the mobilization.	
5	Describe the survey equipment installation.	
6	Describe any local control stations used and how the horizontal and vertical positioning was connected to the survey or national datum.	
7	Describe how the vessel offsets were determined and the results.	
8	Describe the sources of uncertainty and how they contributed to the allowable uncertainty budget.	
9	Include as required any sketches of the survey area, control points, chart or vertical datum points, etc.	
Total		**12**

Safety

Task	Description	Point Value
1	Describe the vessel(s) [or aircraft (if used)] safety procedures including personnel safety and other HSE issues for all operations involved in the project.	
2	Describe the hazard matrix used for the project and the candidate's role in its creation and execution.	
3	Discuss the suitability of the safety procedures and hazard matrix with respect to the project objectives.	
Total		**5**

Project Execution

Task	Description	Point Value
1	Describe any survey equipment and other calibrations procedures carried out before, during and after the project with the results. [Bar Check, VSP profiles, patch test, DGPS health check, etc.]	
2	Describe how the calibration corrections values were utilized during the survey.	
3	Describe the project execution and solutions for minimizing or avoiding problems.	
4	Where acoustic networks were used how they were deployed and calibrated.	
5	For any towed sensors discuss how they were deployed and show positioning (acoustic or layback) calculations and positioning error estimates.	
Total		**8**

Data Collection and Reduction Including Quality Control

Task	Description	Point Value
1	Summary of data collection and processing.	
2	Where tidal data was used how that information was confirmed to be correct and used in the data collection.	

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Task	Description	Point Value
3	Discuss the procedures used to check the data and how the data was confirmed to be acceptable including the results.	
4	Discussion any adjustments applied to the survey data and why.	
5	Discussion of how field data was managed (organized and archived onboard, in the office and transmitted to the client).	
6	Discussion of any issues related to the data collection and processing.	
7	Discussion of quality control systems employed during the project including any specialist software and checklist used.	
8	Discussion of how any deficiencies found were rectified and how procedures / equipment / methodologies were updated.	
Total		**13**

Charts, Plans and Sketches Preparation

Task	Description	Point Value
1	Brief summary of the process to convert raw field data into a chart(s), plan(s) and or sketch(es) and the candidates role in this process.	
2	Identify any chart, plan or sketch checking and quality control measures used including the results of any checklist used.	
3	Should the candidate have been involved with hydrographic chart production then provide a summary of accompanying documents required for the verification of the data portrayed on the chart and client approval.	
Total		**12**

Note: Should the project report not involve the production of charts, plans or sketches then the points from this section will be distributed to the other sections as seems appropriate to the CHCP.

Final Report and Project Management

Task	Description	Point Value
1	Discuss the overall project management including approvals required and correspondence with other interested companies, government agencies and the client.	
2	Discuss how the project results met the contract documentation.	
3	Discuss how the project results met the client's expectations.	
4	Provide any necessary data and document releases.	
Total		**6**

Marking Scheme – Based on IHO C-13

If the candidate wishes to use a suitable hydrographic survey, then the latest version of the IHO C-13, Chapter 7 – Hydrographic Practice, Section 7 – Data Rendering in association with Appendix 5 – Specimen Report of Survey could be used. Marking would break down the various chapters used by the candidate, in a similar manner as above. Acceptance of the Report of Survey by a national hydrographic office would be sufficient for the submission to meet the requirements of the CHCP Project Report requirement. The candidate would have to provide suitable documentation to show the Report of Survey approval.