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(09/2010)

Standard for Pleasure Craft Operator Card Testing Over the Internet

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Marine Safety

National Pleasure Craft Operator Competency Program



TC-1004147



Canada

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1.0 INTRODUCTION

Transport Canada Marine Safety (TCMS) manages the National Pleasure Craft Operator Competency Program under the *Competency of Operator of Pleasure Craft Regulations* (COPCR), which exists to improve the safety of recreational boaters on Canadian waterways. It aims to increase public knowledge of boating safety through high quality training and consistent testing. Taking boating safety courses and/or tests lead to boaters receiving a Pleasure Craft Operator Card (PCOC), which, when carried onboard, is “proof of competency”.

Private sector organizations referred to as Course Providers offer boating safety courses, deliver tests and issue PCOCs. TCMS is responsible for the regulatory oversight of the program including the development of all regulations, standards, policies and guidelines. In support of the program, TCMS has developed a new standard for testing over the Internet.

The new standard, titled *Standard for Pleasure Craft Operator Card Testing over the Internet*, TP 15080E will be used by Course Providers in the development of their Online Study Guides and granting access to online tests.

2.0 LEGAL AUTHORITY

Section 207(1)(b) of the *Canada Shipping Act*, 2001 gives the Governor in Council authority, on the recommendation of the Minister, to make regulations respecting pleasure craft licensing and the safety of pleasure craft. This includes medical fitness, minimum age, **degree of knowledge, skill, training and experience, for operators of pleasure craft or classes of pleasure craft, and the evidence required to prove compliance with those qualifications.**

Based upon this authority, the Minister of Transport formally requests that all recreational boating safety Online Study Guides be based on and reflect the entire contents of both

- *the Standard for Pleasure Craft Operator Card Testing over the Internet*, TP 15080E; and
- *the Boating Safety Course and Test Syllabus*, TP 14932E.

3.0 BACKGROUND

Canada’s National Pleasure Craft Operator Competency Program began in Canada in 1999 in response to boating deaths and injuries, with the goal of improving safety on Canadian waterways through education and training. The program was phased in over a 10-year period and is now fully implemented. Anyone operating a pleasure craft fitted with a motor used for recreational purposes must carry proof of competency on board. Proof of competency can be:

- a Pleasure Craft Operator Card (PCOC) – this is the most common proof, issued to people after they pass an accredited boating safety test;

- proof of having passed a boating safety course in Canada before April 1, 1999;
- a specified marine certificate;
- a completed rental-boat safety checklist, only valid for the rental period.

Online delivery of the National Pleasure Craft Operator Competency Program allows Canadian recreational boaters to access the latest boating safety information and to assist boaters in becoming more familiar and knowledgeable about boating safety.

This new standard replaces the existing *Principles for Testing over the Internet*.

4.0 OVERVIEW

The online delivery of the National Pleasure Craft Operator Competency Program shall consist of two components.

1. A Mandatory Online Study Guide; and
2. A boating safety test randomly generated from the TCMS bank of test questions.

5.0 COURSE PROVIDER SUBMISSIONS FOR APPROVAL

Before implementing TP 15080E, **Course Providers must:**

1. Develop their Online Study Guide, based on their current course manual (containing all elements from TP 14932E) and organized according to TP 15080E;
2. Submit a complete package that includes:
 - a completed application (see Appendix A),
 - a full, hard-copy description of the content, layout and design of the Online Study Guide in the language that it will be delivered* (printout of every page from the table of contents to the chapter review quizzes);
 - a completed Knowledge requirement presentation summary and Formal declaration of the Boating Safety Online Study Guide Content (Appendix C) *available upon request*;
 - a complete print-out of all chapter review quiz questions including all responses and correction grids (minimum of 200);
 - a web address (URL) of the development site (on the application form) which will grant TCMS access for the purposes of review and approval and;
 - appendix B will serve as a checklist to ensure course providers follow the requirements as set out in TP 15080E.

* If delivered in both English and in French, please provide both copies.

3. Demonstrate to TCMS that all requirements of these Standards are met.

6.0 STANDARDS FOR AN ONLINE STUDY GUIDE

TCMS reserves the right to change, update, add or delete any information related to federal regulations or laws and/or any other changes related to boating safety. We will modify TP 15080E accordingly and communicate all changes to Course Providers.

6.1 AUTHENTICATION OF THE CANDIDATE'S IDENTITY

The online registration process will require candidates to supply at least the following personal data:

- First name;
- Last name;
- Date of birth;
- Gender;
- Address (street number, street name, city, province, postal code);
- Phone Number;
- Email address.

The online registration process will validate the data fields to ensure data integrity and will verify that the candidate has supplied all required data.

Once the registration form has been completed and validated, candidates shall be provided with a username and password, which will allow them to access the Online Study Guide.

Course Providers must adhere to a strict privacy policy that ensures that they will not transfer candidate data to any party other than TCMS and Course Provider Card Producer and will not use the data for any purpose except to issue a PCOC.

Course Provider websites shall include a statement about identity fraud.

6.2 ORGANIZATION OF AN ONLINE STUDY GUIDE

Rationale: Simply put, a mandatory Online Study Guide is an electronic book that candidates will read without the presence or help of an instructor. That is why its content must be presented in such a way that allows candidates to learn.

Objective: Candidates must have the opportunity to locate the Online Study Guide's key messages before taking the open-book online PCOC test.

The mandatory Online Study Guide will cover the basics of boating safety, regulations and accepted best practices. **The Online Study Guide must be based on TP 14932E and reflect the entirety of its content, purpose, rationale and objectives.**

The Course Provider must update the Online Study Guide to reflect changes in federal regulations or laws and make any other changes, updates or corrections to the Online Study Guide that are requested by the TCMS at any given time.

Mandatory instructions for developing an Online Study Guide:

When developing the Online Study Guide, the Course Provider must follow these four (4) basic instructions:

1. The Online Study Guide **must** contain the 257 knowledge requirements in their entirety, however it is not necessary that it follow the organization of TP 14932E.
2. The content of an Online Study Guide must adequately reflect the supporting rationale in sections 9.1 to 9.10 of TP 14932E to ensure that recreational boaters understand the importance of learning the required boating safety information.
3. The content of an Online Study Guide must be designed to accomplish the specific learning objectives identified in each section of TP 14932E.
4. The content of an Online Study Guide must satisfactorily explain or describe in appropriate detail each knowledge requirement presented in TP 14932E.

The importance of plain language

Plain language is a requirement of the Communications Policy of the Government of Canada, and a priority at TCMS. Therefore, we highly recommend that you develop your Online Study Guide, making sure the words you use are easy for your audience to read, understand, remember and use. If you are writing to the general public, we encourage you to write at a Grade 4-6 reading level. If you have questions about plain language, email dlotta@plainlanguage@tc.gc.ca for a PDF version of our plain language guidelines.

The Online Study Guide must include the following features:

1. It must contain the full contents of an approved course manual as set out in TP 15080E (completed Appendix C);
2. The Online Study Guide must be organized into no less than five (5) chapters with a chapter review quiz at the end of each chapter;
3. The total number of questions for the chapter review quizzes must be a minimum of fifty (50) and a minimum of ten (10) practice questions per chapter;
4. Each chapter review quiz will require the candidate to successfully answer 80% of the questions correctly before proceeding to the next chapter;
5. The total amount of time required to complete the Online Study Guide must be no less than three (3) hours and each chapter has a minimum set time limit;
6. A candidate may complete the Online Study Guide one chapter at a time, at his or her own pace, over a period of up to one (1) year;

7. The content will be presented in a narrative fashion using consistent headings, titles and labels, and font that is easy to read;
8. The Online Study Guide shall present boating safety information in lesson format with in-depth coverage of the various topics listed in TP 14932E;
9. Chapter review questions and discussion points shall follow each chapter of the Online Study Guide;
10. The Online Study Guide will feature a table of contents or site map;
11. Course Providers will develop chapter review quiz questions that reflect the content presented in each respective chapter;
12. At the end of each chapter review quiz, the candidate will be graded automatically and given their score online. Course Providers **shall not** provide the correct answers for wrong responses;
13. **Course Providers shall demonstrate their services to the candidate (i.e. free 1st chapter) before the start of the Online Study Guide session. This is to ensure that the candidate understands what he or she is paying for and what kind of learning experience they will receive from a particular Course Provider;**
14. The Course Provider must post their refund policy on their website in clear, easy-to-understand language and be viewed by the candidate prior to the payment process.

6.3 ONLINE STUDY GUIDE DESIGN

1. The Online Study Guide web page design will have an attractive, easy-to-read, and consistent look and feel;
2. The content must be presented in such a way as to help users understand and remember the material. However, including elements like graphics, pictures, audio, video and/or animation will be at the discretion of the Course Provider;
3. If Course Providers use graphic, pictures, audio or video clips within the Online Study Guide, they must also provide a written script of any narration that candidates may read. Candidate must also be able to re-play the instructional segments;
4. The Online Study Guide web page design will support all common user environments (various operating systems, web browsers, and connection speeds);
5. Boating terms used in the Online Study Guide will be hyperlinked to their definitions the first time they appear in the guide;
6. The Online Study Guide must be designed so that it actively engages the candidate;

7. The Online Study Guide must not advance automatically. It must be designed so that only the candidate can advance through the guide by clicking on “next” button;
8. The Course Provider must develop a system to keep track of the candidates’ progress at every login and present this information in a written and/or visual fashion.

6.4 GRAPHICS, PICTURES OR ANIMATION QUALITY

1. The Online Study Guide will include graphics, pictures, animations, audio and/or video clips where appropriate to illustrate concepts;
2. Animations will be developed using graphics adaptable for viewing on a variety of screen resolutions;
3. Graphics, pictures, animations, audio and/or video clips will be of reasonable file size for quick download and delivery on a wide variety of user platforms and connection speeds;
4. Animations, audio and/or video clips will allow candidate-paced instruction, where the candidate controls the pacing of the instructional segment and can re-play the instructional segment;
5. Graphics, pictures, animations, audio and/or video clips will be created in a consistent design to engage all age groups of the boating education market;
6. All graphics, pictures, animations, audio and/or video clips must be technically accurate as stated in TP 14932E.

6.5 THE USER INTERFACE

1. Candidates should clearly understand the services the Course Provider offers and have a good sense of the Online Study Guide; how it works and whether it is best suited to the candidate **before** committing to the Course Provider;
2. Candidates must proceed through the guide content in each chapter before taking the chapter review quiz;
3. Candidates will not be permitted to take the chapter review quiz without spending the minimum study time assigned to that chapter;
4. Each timed chapter must conclude with a chapter review quiz that requires the candidate to successfully answer 80% of the questions correctly before proceeding to the next chapter;
5. A candidate may stay in a particular section longer than the time allotted for that section;
6. Course Providers must let candidates know that they have already viewed content by way of:
 - a change in link color; and
 - a check mark or a summary of their completed tasks.

7. Once a candidate has successfully passed a chapter review quiz, he or she can return to the content page for that chapter at any time with no time requirements;
8. The Online Study Guide will not automatically advance;
9. Candidates who score below 80% will receive a message to study the material again. They may not retake the chapter review quiz until they have spent the minimum study time assigned to that chapter;
10. The second quiz can not contain more than 50% of the same questions from the previous quiz;
11. The databank of questions must contain a minimum of 200 quiz questions;
12. The questions must be formulated to be of appropriate content along with plausible answers;
13. Chapter review quiz questions and responses must not be copied or reproduced from the TCMS databank of questions;
14. Candidates will not be able to access the final test without successfully completing the chapter review quiz for each chapter.

7.0 ORGANIZATION OF THE ONLINE PCOC TEST

Once a candidate has successfully completed the Online Study Guide, he or she may take the online PCOC test. Under TP 15080E, TCMS will manage the Online PCOC test through its website as follows:

1. TCMS will manage Course Provider accounts in order to authorize them to download Secure Access Identification Key (SAIK) (*Guidelines for the use & operation of SAIKs to follow*);
2. The Course Provider will download the encrypted SAIKs file through the TCMS website application;
3. The Course Provider will decrypt the SAIKs file by using Entrust certificates;
4. The Course Provider will set its own website application providing the candidate's information and SAIK to the Online PCOC test application by way of an URL or any other existing technologies;
5. The Course Provider website will display a Online PCOC test link to the candidate to provide him/her access to the TCMS Online PCOC test;

6. The Course Provider website will provide the following information about the candidate to the TCMS Online PCOC test application:
 - First name;
 - Last name;
 - Address;
 - Email address;
 - Date of Birth;
 - SAIK.
7. Once the candidate information and SAIK have been validated, the candidate will be logged into the TCMS Online PCOC test site and ready to do the test;
8. The test will contain questions randomly drawn from a TCMS bank of boating safety questions;
9. The test will take place in an open-book format;
10. The test will not require the supervision of a proctor;
11. The test may take place in the candidates' private residence;
12. Test questions may be presented with color graphics or photos to test knowledge of aids-to-navigation, navigation rules, boating at night, and/or other subjects;
13. The candidate will see only one question at a time;
14. The test will be timed and minimum time limit will be set for each question;
15. The candidate will not be able to go back to the previous question;
16. As referenced in the COPCR 4. (1)(a), the passing grade of the test shall be 75%;
17. Each testing event will randomly generate an individual boating safety test that will include boating safety questions generated from the TCMS bank according to a predetermined test matrix;
18. There will be a unique test for each candidate and a SAIK shall be assigned to that particular test and candidate;
19. A candidate may only take one (1) Online PCOC test per day (24 hour);
20. At any time, the TCMS may change:
 - the bank of questions and associated graphics;
 - the number and description of categories (i.e. the testing matrix);
 - the number of questions per category; and
 - the total number of questions on the test.

7.1 THE USER INTERFACE

The testing software will make candidates unable to:

- Print;
- Copy;
- Print screen
- Access other application

...until he or she submits the test for grading.

7.2 AFTER THE TEST

Following the test, candidates will automatically receive their test scores online.

7.3 PASS

1. Once the candidate has successfully passed the test, with a minimum grade of 75%, TCMS will send an email to the candidate that will allow he or she to print a temporary PCOC directly from the TCMS website. TCMS will also send an email confirmation to the Course Provider for information purposes;
2. The temporary PCOC shall display the SAIK, which is tied uniquely to that candidate's personal data. This will ensure that the temporary PCOC is not shared and will make it easy to recognize if the temporary PCOC was generated fraudulently;
3. In addition to the SAIK, the temporary PCOC must also contain the following information:
 - Date of issue;
 - Date of expiration;
 - First Name;
 - Last Name;
 - Date of birth;
 - Name of Course Provider;
 - Course Provider phone number.
4. The temporary PCOC expires when candidates receive their permanent PCOC or no later than 60 days after the date they passed the test;
5. The Course Provider is responsible for providing the candidate with the permanent PCOC.

7.4 FAIL

1. If a candidate fails the final test, he or she may retake the test up to one (1) time without repeating the Online Study Guide. The second test must be taken after 24 hours and within 30 days;
2. If the candidate fails the test, TCMS will send an email to the Course Provider;
3. The candidate will be required to access the Course Provider website in order to have access to the TCMS website to repeat the Online PCOC test;
4. If the candidate fails the test twice, TCMS will email the Course Provider and the candidate will be required to start the entire Online Study Guide again from the beginning — with the time requirements in place.

8.0 COURSE PROVIDER CONTACT

1. The Online Study Guide and test must provide candidates with an e-mail link or phone number they can use to contact the Course Provider;
2. Course Providers must respond to all inquiries within a 48-hour period;
3. Automated responses stating that the Course Provider has received the user's e-mail will not satisfy this requirement;
4. The Course Provider must indicate their normal business hours and provide a reasonable timeframe for when the candidate should expect a response.

9.0 PROMOTION OR ADVERTISING

There shall be no promotional material or advertising visible on screen anywhere in the Online Study Guide.

All promotional material on a Course Provider's website shall be done ethically and honestly and shall not be designed or intended to mislead the Canadian public in any way.

Course Providers shall not collect names or e-mail addresses of other potential candidates from online candidates.

10.0 REAL TIME MONITORING DURING PCOC ONLINE TESTS

An online, web-based system must allow real time monitoring of candidates taking the Online PCOC test.

This will provide information on how many candidates are taking the test at a certain moment, the time they are logged in, how many questions they have submitted so far and the final answers.

TCMS shall request from time to time access to Course Provider websites for monitoring purposes. This will be to review Course Provider websites and will be on request only.

Course Providers must make candidates aware that when they apply for an Online Study Guide and access the Online PCOC test, their personal information will be used for auditing purposes only.

APPENDIX A – APPLICATION FORM

APPLICATION FORM FOR REVIEW & APPROVAL - ONLINE STUDY GUIDE

Name of Course Provider:

**Official Name of Company and/or
Organization as it is indicated in the
registry of your province:**

Name of Online Study Guide:

Course Provider Contact:

Address:

Phone:

Fax:

Email:

Web Address:

Web Address (Development site):

Language:

Instructions as per Section 5.0:

When completed, please return to:

**Chief, National Pleasure Craft Operator Competency Program
Marine Security
Transport Canada
330 Sparks Street
Tower C, Place de Ville, 8th floor
Ottawa, Ontario
K1A 0N8**

Note: The applicant shall provide copies of its *Canada Business Corporation Act* Incorporation Articles and Certificates or the equivalent documents issued under the law that created it.

APPENDIX B – CHECKLIST FOR IMPLEMENTING TP 15080E PLEASURE CRAFT OPERATOR CARD TESTING OVER THE INTERNET**Introduction**

This Checklist will help Course Providers ensure they are following the requirements established by TCMS and as set out in the *Standard PCOC Testing over the Internet*, TP 15080E.

1.0 Online Study Guide: Required Items

Element	Yes	No	Note
Completed Application form			
Hard copy description of the Online Study Guide in the language that it will be delivered			
Web address (development site for the Guide)			
Course Manual			
Converted to Hypertext Format (HTML, Flash)			
Web page with information about the Online Study Guide and PCOC Online Test			
Online registration form (personal information from the candidate)			
Clear description of services & prices rendered to the candidate (i.e., free Chapter sample)			
Statement on identity Fraud			
Privacy Policy			
Payment policy			
Refund Policy			
Site tested with the main browsers			
Accessibility Compliant (W3C Standards) www.w3.org			
Sample chapter (free chapter)			
Course Provider contact e-mail, live chat or phone number for candidates to be used anytime during the Online Study Guide			
Table of Contents			
Written script (in case of narration)			

Tracking Element (show candidates where they stopped)			
Timed element implemented (stipulates a minimum time for each chapter)			
Sample chapter review quiz			
List of all chapter review quiz questions (minimum 200)			
Chapter review quizzes Implemented			
Automatic chapter review quiz grading			
Chapter review quiz grade boundary fixed at a minimum 80%			
Chapter review quiz failure warning (if the candidate scores less than 80%, he/she should repeat the entire chapter again)			
PCOC Online Test link to TCMS created			
Email sent to candidate with results			

1.2 PCOC Online Testing Requirements – TCMS – UNDER DEVELOPMENT AND TO FOLLOW

**APPENDIX C – KNOWLEDGE REQUIREMENT PRESENTATION SUMMARY
& FORMAL DECLARATION OF THE BOATING SAFETY
ONLINE STUDY GUIDE CONTENT**

Available upon request only.