This document defines and describes the language, structure and frameworks that we will use to develop Rubrics for the On-Water SAIL and HUMAN Standards.

Our purpose for establishing On-Water SAIL and HUMAN Standards and Rubrics

As a reminder of our reason for getting together, we are working to identify the core set of entry-level skills that recreational SAIL and HUMAN-propelled boat operators need to be able to demonstrate. Therefore, we need to be able to identify *what* skills operators need to have at an *entry-level* (beginner) of proficiency. We also need to be able to assess whether or not a particular individual can demonstrate those skills.

It is important to remember that this work takes place in the larger context of establishing a *National System of Standards for Recreational Boat Operation.* This larger system will incorporate multiple levels of skill-based standards (e.g., intermediate, advanced) as well as previous and future work on standards within the SAIL, HUMAN and POWER domains. It will not only include outcome standards (as the current work focuses on for SAIL and HUMAN) but also those for standards associated with instructional methods, instructor qualifications, equipment quality, etc. Therefore, the work we produce here also needs to fit within that larger system of standards.

Definition and purpose of Rubrics

There are a number of different approaches and definitions of Rubrics. For our work, we will define Rubrics as the criteria and standards that describe what the final product of performance will look like. They will be used to:

- Clarify what is expected of the boat operator at an entry-level of skilled performance.

- Specify elements of the performance *that matter most* and detail *how to distinguish strong performance from weak ones*.

- Facilitate consistency in judging individual skill level. The more clear the criteria and standards, the more likely you will have consistency in judging across individuals and their skill levels.

Eventually, the Rubrics will be used to ensure instructional processes deliver what individuals beginning the process of learning to operate a recreational SAIL and HUMAN-propelled boats are expected to be able to do as a result of receiving instruction.

Process and Outcome Focus of Rubrics

Rubrics can focus on both *Outcome* and *Process* criteria for success. Outcome-based rubrics identify the result of the skill having happened. For example, in badminton, it would be the number of first serves that land in the court. Process-oriented Rubrics focus on the way a particular task is accomplished, or the critical elements necessary to perform the skill. In the badminton example, process-oriented Rubrics might focus on the height, speed and placement of the birdie as it passes over the net.

Since the performance outcomes have already been defined in Part A (Skills) of the standards, our work will focus on identifying Process-oriented Rubrics for each standard. The goal is to expand our understanding and descriptions of the levels of proficiency in Part B associated with each skill.

Generalized versus Task-Specific Rubrics

There are different ways to write a Rubric. Two such ways are *Generalized* and *Task-Specific* Rubrics. Generalized Rubrics are written to provide a broad definition or general description of the performance. Characteristics of the task are described in vague terms and fit well when the task is general behavior. *Task Specific* Rubrics, on the other hand describe the characteristics of the task in specific and exact terms, well defined and focused on the particular task at hand. Task Specific Rubrics tend to have higher reliability as they are written for the specific task.

Our work will involve developing Task Specific Rubrics for each standard. They will provide the detail and specificity we will need to ensure a clear and concise picture of the performance associated with effectively demonstrating each skill.

Rubrics Scales

There are a number of different kinds of scales that can be used to form Rubrics. The kind of the scale depends on what you are trying to accomplish with the Rubrics and how many levels of performance you want to differentiate. For example, *Checklist* Rubrics are structured lists that identify each individual desired behavior and typically employ yes/no, or point gradation systems to rate performance. The result of their application is the identification of which individual behaviors/skills were observed and to what extent. On the other hand, *Holistic* rubrics provide one all-inclusive description of all the skills and behaviors associated with each level of performance on the entire activity task overall. They typically result in a general identification of the level of performance an individual has related to the overall task, rather than the specific skills within the task.

Analytic Rating scales are somewhere in between. They include specific descriptions of performance related to each skill and enable judgments to be made about the quality of the performance on the task. Analytic Rating scales allow the ability to assess the extent and quality to which the description of a skill and its related behavior are present. They can be made with quantitative (numbers) and qualitative (words) rating scales. A *quantitative scale* describes the skill and uses a scale of numbers to determine how well the skill was performed. In badminton, for the skill of shot execution, the description would be:

Skill of Shot Selection: The individual moves into position quickly and executes the highest percentage shot available.
The scale is: 0= never; 1 = sometimes; 2=usually; 3-always.

The *qualitative scale* provides a description of the skill at different levels of proficiency. For example, for the skill of shot execution in Badminton, the rubric would be as follows:

The individual:
4: Executes all shots with good form using them at appropriate time.

3: Uses most shots presented with good form, usually using them at appropriate times.

2: Uses several of the shots presented but not always at the appropriate time. Some form breaks are apparent, however, form is mostly correct.

1: Relies on 1-2 shots for the entire game. Incorrect form causes shots to be misplaced or ineffective.

Our work will focus on identifying Analytic Rating Scales with the qualitative scoring system for each standard. We need to be able to have the evaluation of those levels of performance happen by many different instructors, in many different environments, on many different kinds of recreational boats, and repeatable over time to ensure broad and consistent application of the On-Water Standards. The qualitative rating system for each level provides the most productive approach to accomplishing these objectives.

Also, because the Standards identify entry-level skills – the beginning of skills development, we need to be able to differentiate successful performance from that which needs development; and from unacceptable/ unsuccessful performance. Therefore, will be developing a three-level Analytic Rating Scale for each standard that will distinguish the following levels of proficiency:

*3 - **Successful Performance**. Demonstrates successful performance of the skill at the desired level of proficiency.*

*2- **Needs Improvement**. Demonstrates some aspects of the skill but there is room for improvement to demonstrate the target level of proficiency.*

*1- **Unacceptable (unsuccessful) Performance**. Performance of the skill includes errors and/or omissions of necessary behavior to successfully demonstrate the skill.*

In consultation with Dr. Stephen Silverman, the SME on assessment involved in the grant, he suggested that a three-level scale would be effective for the kind of differentiation we are trying to make with our On-Water Standards. In the future, as we move into setting standards for intermediate or advanced skills development, additional or more finely tuned differentiation of skilled performance may be more appropriate or necessary. The three-level scale will allow differentiation between levels of proficiency while also allowing identification of growth and development opportunities that instructors can use to encourage recreational boaters to continue their learning over time. It will also help establish a precedent for a curricular approach to skills development (through intermediate and advanced skills) within the National System of Standards that encourages a process of life-long learning in recreational boat operation.

The following is an example of a Rubric developed for the skill, *Turn the boat.*

Level	**Turn the boat** *by safely executing a pivot turn of at least 180-degrees within a space of 1 to 2 boat lengths.*
3 - **Successful Performance**	Turns vessel 180 degrees within 1 to 2 boat lengths. Turns helm smoothly using forward & reverse gear. Shifts smoothly without grinding most of the time. Pauses briefly in neutral all the time. Throttle is used smoothly and kept at appropriate low (idle) speed most of the time. Lookout is maintained throughout the maneuver.
2 - **Needs Improvement**	Turns vessel 180 degrees within 2 to 3 boat lengths. Properly turns helm with forward & reverse gear most of the time but with awkward transitions. Occasionally turns helm after shifting into gear. Shifting includes grinding half of the time. Pauses in neutral with awkward or rough transition of throttle half the time. Applies more throttle than needed half the time. Lookout is maintained at times during the maneuver.
1 - **Unacceptable Performance**	Turns boat 180 degrees within more than 3 boat lengths or is unable to turn boat 180 degrees. Repeatedly turns helm in wrong direction while in forward or reverse. Turns helm after shifting into forward or reverse most of the time. Shifts with frequent grinding, or sudden uncontrolled shifting of gear almost all the time. Typically does not pause in neutral. Uses excessive or uncontrolled applications of throttle. Is preoccupied with turn and does not maintain a lookout.

General Process for Developing Rubrics

We will use the following process to develop the rubrics during the workshop:

Step one: Identify the priority criteria associated with performing the skill.

Step one identifies the most important behaviors to evaluate in the form of criteria. These criteria will be used to assess the proficiency of the three levels of performance. In the *Turn the boat* example above, the descriptions identify the qualities of the behavior for each level of performance. When you look across the descriptions, you notice themes, which are the criteria used to judge the performance. For this particular skill, the criteria are: the degree of the turn, the size of turn (number of boat lengths), applying the throttle, shifting gears, and ensuring lookout.

Step two: Develop descriptions for each level of proficiency.

Once we know what criteria will be designed into the Rubric, the next step is to write a description of the three levels of performance that distinguishes the level proficiency on each criterion. We will begin by drafting the description of Successful Performance. This description includes the current Part B that is contained in the On-Water Standard. This should make it easier to develop descriptions for the other two levels of performance.

The result of our work during this workshop will be Version 1 of the Rubrics. Once completed, Version 1 of the Rubrics will go through a National Content Validation process similar to process used to validate the Standards. The result of that validation process will be On-Water Rubrics Version 2.

This work has been produced through US Coast Guard grant funding to **US SAILING** to facilitate a consensus-based process by which a team of diverse SMEs from across the recreational boating community develops On-Water, entry level, skill-based performance standards as part of a *National System of Standards for Recreational Boat Operation.*

An objective grant facilitator is designing and managing the collaborative development of SAIL, POWER and HUMAN propelled standards that will be made freely available and recognized (not mandated) by the U.S. Coast Guard for voluntary incorporation in beginner-level recreational boating training programs.

For more information, please visit the On-Water Standards Initiative website at: www.onwaterstandards.org. Or, contact K. Brian Dorval, On-Water Standards Facilitator at 716-994-2842. You can also email him at: **brian@thinkfirstserve.com**.

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