



IALA MANUAL ANNEX B

USE OF THE PORTS AND WATERWAYS SAFETY ASSESSMENT (PAWSA) MKII TOOL – PREPARING AND FACILITATING A PAWSA WORKSHOP

Edition 1.0

November 2022

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DOCUMENT REVISION

Revisions to this document are to be noted in the table prior to the issue of a revised document.

Date	Details
November 2022	First edition. The PAWSA manual was created from the separation of the annex from Guideline <i>G1124 Use of the Ports and Waterways Safety Assessment (PAWSA) Mk II Tool</i> , Edition 2.0, which was separately approved by IALA Council June 2022. This Annex to the Manual provides practical information on the roles, responsibilities and resources required to facilitate a PAWSA workshop.



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1. INTRODUCTION

This Annex to the IALA *Use of the Ports And Waterways Safety Assessment (PAWSA) MkII Tool* Manual discusses initial preparations for planning a PAWSA workshop, with specific details regarding sponsor and facilitation team roles / responsibilities and the logistics of arranging for the workshop meeting facility.

The quality of the advance preparations may well decide the success of the waterway risk assessment. The participants are busy people; scheduling the workshop well in advance is critical to ensuring that the right people can attend. The following are proposed general timeframes for some of the more critical steps in the planning process:

- commence preliminary logistics (e.g., notice to local community, initial workshop participant considerations, locate facility, etc.) at least 60 days in advance;
- set the workshop dates and location approximately 45 days in advance; and
- ensure invitees receive the sponsor's letter of invitation and read ahead material approximately 30 days in advance of the workshop.

2. READ AHEAD MATERIAL

Prior to the workshop, a read ahead package containing general PAWSA related information, including the history of PAWSA and a description of the workshop process, should be sent to each invitee, along with the formal letter of invitation. This material provides the participants with details about the assessment objectives, the process, and the expected output. However, experience indicates that several reminders will be required to obtain a high percentage of compliance with this requirement. The sponsor or the primary point of contact should remind each invited participant—both before and after the invitation letter is sent—of the importance of actually reviewing the read ahead material prior to the workshop, as well as reviewing the participant folder contents upon arrival at the workshop.

Personal contact and the formal letter of invitation should reinforce the motivational message and allow the sponsor / primary point of contact to respond to any relevant questions that might arise before the PAWSA workshop. Past experience shows a very high correlation between the sponsor personally making follow-up contact with invitees and people showing up at the workshop. This is not something that should be delegated to junior staff.

3. SELECTING A SUITABLE WORKSHOP FACILITY

Select the facility well in advance to ensure adequate space and appropriate accommodations will be available. Generally, selecting a location 60 days in advance of the workshop allows enough time for the facility point of contact and the facilitation team to properly prepare for the workshop. The meeting facility should be convenient for the participants and the sponsor to get to, taking into account where people live and the commuting situation. More importantly, the meeting facility must be large enough to accommodate the expected number of participants, observers, and facilitation team needs.

To convey an image of serious intent, to minimize unintended distractions, and to focus the attention of participants, adequate facilities and amenities are required for the workshop. The use of a sponsor facility is not recommended for the workshop for two reasons: (1) most sponsor facilities cannot meet the space requirements, and (2) meeting at a facility other than the sponsor's venue helps to project the image of a local planning partnership facilitated, but not dominated, by the sponsor.

The workshop room should be spacious, well-lit and ventilated, with sufficient space for all participants to be comfortably seated at tables. The meeting room must be large enough to accommodate participant and observer space, facilitation team requirements and visual displays.

4. SELECTING PARTICIPANTS

Once the facilitation team is assigned and the location and dates of the workshop are determined, the participants must be selected.

The sponsor has two key objectives in selecting workshop participants: (1) to draw into the process navigation and traffic management expertise, and (2) to ensure representation of all significant stakeholder groups within the affected local community. Meeting both objectives can be a challenge, especially while limiting the number of participants actively involved in the workshop sessions to 30 people. The sponsor's knowledge of who the key people are in the maritime community is the single best tool in the selection process, and must be applied to ensure that a knowledgeable, respected, and inclusive group is convened.

The sponsor has to convince prospective workshop participants, via both a formal invitation letter and telephone contact, that the sponsor's agency is preparing a thoroughly organized and critically important forum for discussing the waterway's safety requirements. The following ideals must be adequately conveyed to each prospective workshop participant:

- The concept of equal partnership in waterway community planning.
- Their individual expertise and energy are needed.
- The participants will represent a cross section of the waterway users.
- The common goal is to improve the safety of their waterways and infrastructure.

4.1. CRITERIA

Some standard criteria should be considered for the selection of workshop participants. Sponsors should work to achieve a 60/40 mix of "waterway users" and "stakeholders". Ideal participants include those who have been in the local area for an extended period of time and regularly use professional skills in one or more of the following areas: pilotage, ship handling, aids to navigation, maritime law enforcement, vessel traffic management, protection of natural resources, marine casualty response and investigation, and waterway community planning and economics.

Collectively, workshop participants should:

- represent a broad cross-section of the local community that can speak as reliable and respected representatives of others engaged in similar work, or having similar interests; and
- be recognized by the entire local community as a group of individuals who can represent all their interests.

5. INVITING PARTICIPANTS

The waterway user and stakeholder selection process should involve exploratory contact by the sponsor and the primary point of contact in addition to initial discussions with prominent members of the local community. The effort to identify able and willing candidates to provide comprehensive expert representation should be initiated approximately 45 days in advance of the workshop. Building the final participant list and establishing a schedule acceptable to all will be an iterative process involving numerous telephone calls by the sponsor and the primary point of contact. This advance effort should be completed before the invitation letter is prepared and mailed to participants.

When contacting potential participants emphasize the importance of their attending both days of the workshop. If a participant is unable to attend both days, an alternate arrangement should be made to ensure a similarly qualified individual is able to fill in.

Once the final participant list is determined, the sponsor should mail a formal letter of invitation to each selected participant. The objective of the sponsor's formal letter of invitation is to:

- confirm the objective and scope of the assessment;
- remind the invitees of the dates, times, and location of the workshop;
- encourage the invitees to review the read ahead material;
- characterize the waterway users and stakeholders with whom the invitee will collaborate; and
- motivate an affirmative response and active participation from the invitees by stressing the potential benefits of participation, and by inference, the potential loss from failing to participate.

6. PRE-WORKSHOP MEETING

A couple of days before the PAWSA begins, the sponsor, appropriate members of the sponsor's staff, the facilitation team, and any other personnel responsible for helping with the workshop should meet in person to review and discuss workshop details, including, but not limited to, the following:

- Overall workshop objectives (not a detailed review of the waterway risk assessment process, which will be discussed in detail by the facilitator early on the first morning), discussion of why the participants were selected, and the workshop products.
- Issues specific to that waterway including significant safety risks from the sponsor's perspective, politically sensitive issues and the recommended geographic boundaries of the waterway.
- Participant details including a list of actual attendees (known at that point), homogenous team assignments and any participant strengths and weaknesses.
- Logistics details including final facility requirements (e.g., providing final head count to facility as required in advance of the function, last-minute changes to times, etc.), completion and use of the waterway chart and workshop materials (e.g., participant folders, books, etc.).
- Daily session review plans, including who should attend.
- Waterway familiarization tour issues, if necessary.

7. WORKSHOP PROGRAMME OVERVIEW

7.1. GENERAL REQUIREMENTS

A successful risk assessment workshop for any waterway requires the following, as a minimum:

- Sufficient time for proper instruction of the participants about the overall process and risk model concepts.
- Time for adequate guided discussion of each risk factor.
- Elicitation of considered responses from each expert for each risk factor in each book.
- Feedback.
- Confirmation of results.

Typically, 16 working hours, over a period of two full days, are required to accomplish the foregoing.

7.2. SCOPE AND OBJECTIVE OF EACH DAY

7.2.1. DAY ONE

The presentations that occur in the morning on the first day provide an overview of the entire PAWSA process, while hopefully motivating the participants. The information includes the sponsor's opening remarks, administrative items, review of the workshop agenda, the PAWSA background briefing, and an explanation of the risk assessment process.

During this portion of the workshop the participants are introduced to the Waterway Risk Model and the associated risk categories and risk factors that will be the focus of the two-day session. Once the general information is provided, participants complete Book 1: Team Expertise just for their team. That input is used to create preliminary weights for subsequent inputs. Participants also complete Book 2: Risk Factor Rating Scales.

Following lunch, participants review the Book 2 results, which leads into discussions pertaining to actual risk in the waterway for each risk factor. Book 3: Baseline Risk Levels is used to numerically evaluate risk levels based on the participants' discussions.

This portion of the workshop *does not* consider risk mitigating measures that are already in place. During discussions, participants should be encouraged to identify, where appropriate, trends and changes under consideration, so that they are incorporated into the risk assessment process.

7.2.2. DAY TWO

The second day begins with a review of the preliminary Book 3 results and continues with an in-depth discussion and evaluation of Book 4: Mitigation Effectiveness. This portion of the workshop does consider current mitigation measures. Just before lunch, the Book 1 evaluation forms are returned to the participants, who finish evaluating the relative expertise of all teams.

Following lunch on the second day, the participants review the final Book 3 and Book 4 results, which leads to discussion and evaluation of Book 5: Additional Mitigations. Late during this session participants complete the workshop critique and review the final results from Book 5.

7.3. DAY ONE ACTIVITIES

A great deal of information is provided to the participants on the morning of the first day of the workshop. Very often, the first few minutes set the tone for the rest of the workshop. Without a proper start and thorough knowledge of the session details, these first few minutes can set a poor, rather than a positive, tone for the entire process. Therefore, the facilitation team must ensure that everyone knows their role(s) and most importantly, keeps the workshop on schedule to avoid having to rush things later in the day.

Unless otherwise noted, during the remainder of this chapter all steps should be completed by the facilitator.

7.3.1. MORNING PROCEDURES

The morning portion of the workshop focuses on why the workshop is necessary, the reasoning behind the specific participant selection, the background of the PAWSA process, and a thorough explanation of the Waterway Risk Model and its components.

The first and critically important step of the entire workshop is the sponsor's welcoming remarks. The sponsor should be thoroughly prepared to deliver the welcoming remarks information in such a way that the participants feel like their time commitment will be well worthwhile. The basic topics that the sponsor should cover include the workshop objectives, the reasoning behind selecting the individuals who are present, and the products that result from the workshop. In general, the sponsor should try to reinforce the idea that cooperative state/local effort is the best approach to accurately identifying risks and selecting appropriate countermeasures.

Once the sponsor has welcomed the group, the facilitator introduces the facilitation team and then invites the participants to introduce themselves. While this is occurring, the facilitator should pass around the attendees



contact list to all participants and observers. After the list has circulated, the facilitator should make an announcement ensuring that each attendee has had the opportunity to review the list and make changes as necessary. Once completed, the data entry person should review/correct the document as needed, making note of which individuals are observers.

Upon completing the introductions, all necessary administrative items should be addressed to the participants.

After covering all necessary administrative items, the PAWSA background and an overview of the Waterway Risk Model to explain the concepts underlying each risk factor in the model should be introduced. This necessitates a very brisk pace and requires in depth knowledge by the facilitator about nuances in the concepts underlying the model. Encourage the participants to take notes and ask questions. Once this explanation is done, make sure all teammates are seated next to each other, either based on original team assignments or on necessary adjustments due to additional participants and/or substitutions.

Instruct the participants to discuss with their teammate(s) the team's strengths and weaknesses with respect to the Waterway Risk Model categories. Then have a spokesperson from each team brief the other workshop participants on their discussion. Following those short presentations from each team, explain how to fill out Book 1, and ask them to do so. Remind the participants to complete only their team's column. Once all teams are finished, collect all copies, and give them to the data entry person for entry into the PAWSA software.

Similarly, describe how to fill out Book 2, and have the teams complete Book 2 accordingly. As with the previous Book, as the teams complete their evaluations collect the books and give them to the data entry person for entry into the PAWSA software.

7.3.2. AFTERNOON PROCEDURES

Display the Book 2 results and review them with the participants. Make sure the participants are clear on how those Book 2 rating scales are used. The rest of the afternoon session focuses on assessing the current risk levels in the waterway, without taking into account the mitigating measures already in place; that is, the baseline risk for each factor in the Waterway Risk Model.

Begin this discussion by having the participants define the geographic area to be discussed; the note taker should record this information for the PAWSA workshop report. While Book 3 discussions are occurring, the note taker also should record a general sense of the discussion in short sentence form for the same PAWSA workshop report. Participants should be reassured that all notes will be recorded anonymously, i.e., there will be no individual or organizational identification of who made a particular comment.

Explain that the waterway chart presented at the front of the room is used to visually identify risk areas during the Book 3 discussion. As noted in Chapter 5, this can be accomplished by placing adhesive markers on specific risk areas mentioned, color-coded to match the Waterway Risk Model category being discussed.

Due to the length of the discussions and evaluations, the Book 3 discussion can be broken down into three logical sections between scheduled break periods as follows:

- 1 Vessel Conditions and Traffic Conditions: initiate a discussion of waterway risks for the Vessel Conditions risk factors. Once that discussion is done, explain how to fill in Book 3, then ask participants to check the blocks on page 1 of Book 3 that best describe the waterway being discussed. Once all teams are finished evaluating the Vessel Conditions category, continue the discussion for the Traffic Conditions risk factors. Finally, ask participants to complete page 2 of Book 3 before taking a break.
- 2 Navigational Conditions and Waterway Conditions: initiate a discussion of waterway risks for the Navigational Conditions risk factors, then ask participants to fill out page 3 of Book 3. Once all teams are finished with the Navigational Conditions category, continue the discussion for the Waterway Conditions risk factors and ask participants to complete page 4 before taking a second break.
- 3 Immediate Consequences and Subsequent Consequences: remember to shift the focus to the impact side of the risk equation when discussing these two risk categories. Initiate a discussion of waterway risks for the Immediate Consequences risk factors, then ask participants to complete page 5 of Book 3. Once all

teams are finished with the Immediate Consequences category, continue the discussion for the Subsequent Consequences risk factors and ask participants to complete page 6 of Book 3.

Once all teams have finished their Book 3 evaluations, collect all copies, and provide them to the data entry person for entry into the PAWSA software.

To wrap up the participant-portion of the first day of the workshop, provide a quick review of what they did today and what they can expect to do tomorrow. After , any and all questions are answered, the participants may be excused.

7.3.3. SESSION REVIEW

After the participants have left the workshop room, a session review is conducted (i.e., a discussion of how the first day went). During the session review the sponsor and all members of the facilitation team, as well as any supporting sponsor personnel deemed appropriate, are given the opportunity to provide feedback on how the workshop is going. That feedback should cover overall impressions, presentations, facilities, participant mix and level of involvement. During this discussion, constructive criticism is necessary, focused on any changes needed before the second day of the workshop.

7.4. DAY TWO ACTIVITIES

The process used for the second day is very much like what was done for the first day, but with a much different focus. The second day focuses on mitigating the risks that were brought up during the first day's discussion and evaluation. After the Book 3: Baseline Risk Levels results are reviewed, participants discuss the mitigating measures that are currently in place for each factor, which are then quantitatively measured using Book 4. During the afternoon session, other suggestions are offered for further reducing risk in the waterway. The potential effectiveness of those additional actions is then evaluated using Book 5: Additional Mitigations.

7.4.1. MORNING PROCEDURES

At the start of the day, review the agenda for day two to refocus all participants and observers as necessary, and display, review and discuss the results from Book 3.

The rest of the morning focuses primarily on existing risk mitigations. There are sure to be many mitigating measures already in place. Consequently, the discussion needs to be about both the extent to which they are used and their effectiveness. These concepts must be fully understood before moving on to the afternoon portion of the workshop.

As was done on day one, the note taker should record a general sense of the Book 4 discussions in short sentence form for the PAWSA workshop report.

As was done with Book 3, the Book 4 discussion can be broken down into three logical sections between scheduled break periods, as follows:

- 1 Vessel Conditions and Traffic Conditions: initiate a discussion of existing risk mitigations for the Vessel Conditions risk factors. Once complete, explain how to fill out Book 4 and ask participants to complete the Vessel Conditions section of Book 4. Once all teams are finished evaluating the Vessel Conditions category, continue the discussion of existing risk mitigations for Traffic Conditions risk factors; ask participants to complete the Traffic Conditions section of Book 4.
- 2 Navigational Conditions and Waterway Conditions: initiate a discussion of existing risk mitigations for the Navigational Conditions risk factors; ask participants to complete the Navigational Conditions section of Book 4. Once all teams are finished with the Navigational Conditions category, continue the discussion of existing risk mitigations for Waterway Conditions risk factors; ask participants to complete the Waterway Conditions section of Book 4.
- 3 Immediate Consequences and Subsequent Consequences: remember to shift the focus to the impact side of the risk equation when discussing these two risk categories. Initiate a discussion of existing risk mitigations for the Immediate Consequences risk factors; ask participants to complete the Immediate

Consequences section of Book 4. Once all teams are finished with the Immediate Consequences category, continue the discussion of existing risk mitigations for Subsequent Consequences risk factors; ask participants to complete the remainder of Book 4.

Once all teams have completed their Book 4 evaluations, collect all copies, and give them to the data entry person for entry into the PAWSA software.

Give each team their copy of Book 1: Team Expertise and tell the teams in general terms about the Book 1 results. Typically, at least 50% of the teams will have put themselves into the “upper third division”, and very few will have put themselves in the “lower third division”. Have the teams completely fill out Book 1, evaluating where all the teams relate to each other with respect to their expertise in each risk category. Encourage participants to place equal numbers of 1’s, 2’s, and 3’s on each line of the form, which will achieve the desired expertise distribution. Remind teams that if they choose to change the input previously provided about their own expertise, they should X out the previous entry and circle the new number. As teams finish Book 1, collect the forms and give them to the data entry person for entry into the PAWSA software. This completes the morning portion of the workshop; therefore, tell the participants where to get lunch and when the workshop will reconvene.

7.4.2. AFTERNOON PROCEDURES

On the second day, the afternoon focuses on interventions that might provide additional risk reduction for the waterway. Before beginning those discussions, first review the Book 4 results with the participants. Next, explain in detail the concepts underlying the mitigation intervention categories. Analysis of past PAWSA workshop results has shown that mitigation strategies seem to fall into the following nine categories:

<i>Co-ordination/Planning</i>	Improve long-range and/or contingency planning and better co-ordinate activities improve dialogue between waterway stakeholders.
<i>Voluntary Training</i>	Establish/use voluntary programs to educate waterway users in topics related to waterway safety (rules of the road, ship boat handling, etc.).
<i>Rules & Procedures</i>	Establish/refine rules, regulations, policies, or procedures (navigation rules, pilot rules, standard operating procedures, licensing, required training and education, regulated navigation areas, etc.).
<i>Enforcement</i>	More actively enforce existing rules/policies (navigation rules, vessel inspection regulations, standards of care, etc.).
<i>Nav / Hydro Info</i>	Improve navigation and hydrographic information (Broadcast Notices to Mariners, charts, coast pilots, Automatic Identification System (AIS), tides and current tables, etc.).
<i>Radio Communications</i>	Improve the ability to communicate bridge-to-bridge or ship-to-shore (radio reception coverage, signal strength, reduce interference and congestion, etc.).
<i>Active Traffic Management</i>	Establish/improve a Vessel Traffic Service or Local Traffic Service.
<i>Waterway Changes</i>	Widen/deepen/straighten the channel and/or improve the aids to navigation (buoys, ranges, lights, LORAN C, Differential Global Positioning System (DGPS), etc.).
<i>Other Actions</i>	Risk mitigation measures needed that do not fall under any of the above intervention strategy categories

The Book 4 results are used to stimulate discussion relating to what additional interventions are needed to further mitigate risks in the waterway. The only risk factors discussed during this portion of the workshop are those that the Book 4 evaluation showed are not well balanced with existing mitigations (i.e., those risk factors with either a red flag (No or Rising) or a yellow flag (Maybe) as the result). After being properly instructed, participants consider what else needs to be done for a particular risk factor and indicate their opinions in Book 5.

As with earlier portions of the workshop, while Book 5 discussions are occurring, the note taker should record a general sense of the discussion in short sentence form in the appropriate portion of the same PAWSA workshop

report template. The facilitator also may use a flipchart (or an appropriate mean) at the front of the room to write down brief phrases (e.g., three-to-five-word bullets) that capture the essence of the new mitigation ideas being discussed for each risk factor. If this is done the teams will have something to refer to when filling out Book 5.

Again, due to the length of the discussions and evaluations, the Book 5 discussion can be broken down into three logical sections between scheduled break periods, just as was done for Book 3 and Book 4. Remember, only discuss and have the participants evaluate risk factors displaying a red or yellow flag; there is no need to discuss/evaluate mitigation interventions for those risk factors displaying a green flag.

- 1 Vessel Conditions and Traffic Conditions: initiate a discussion of additional risk mitigations for the Vessel Conditions risk factors only. Then explain how to fill out Book 5 and ask participants to complete page 2 of Book 5. Once all teams are finished with the Vessel Conditions section, continue the discussion of additional risk mitigations for Traffic Conditions risk factors; ask participants to complete page 3 of Book 5.
- 2 Navigational Conditions and Waterway Conditions: initiate a discussion of additional risk mitigations for the Navigational Conditions risk factors; ask participants to complete page 4 of Book 5. Once all teams are finished with the Navigational Conditions section, continue the discussion of additional risk mitigations for Waterway Conditions risk factors; ask participants to complete page 5 of Book 5.
- 3 Immediate Consequences and Subsequent Consequences: initiate a discussion of additional risk mitigations for the Immediate Consequences risk factors; ask participants to complete page 6 of Book 5. Once all teams are finished with the Immediate Consequences section, continue the discussion of additional risk mitigations for Subsequent Consequences risk factors; ask participants to complete page 7 of Book 5.

Due to the amount of time needed for Book 5 data entry, each page should be collected by the facilitator upon completion and given to the data entry person for immediate entry into the PAWSA software, allowing the results display to be completed prior to the participants' review.

While the data entry person continues to enter the Book 5 inputs, ask all participants and observers to individually complete the workshop critique. When collecting the critiques, remember to do so in a manner that preserves anonymity. Once all critiques are collected, display, review, and discuss Book 5 results with the participants. Upon conclusion of the discussion, wrap up the workshop by thanking the participants and the observers on behalf of the facilitation team. Then turn the floor over to the sponsor for final remarks.

7.4.3. SESSION REVIEW

As was done on day one, a session review should be conducted once the participants have left the room following the last workshop session. Aside from discussing overall impressions of day two, the basis for this meeting is to ensure that the sponsor, sponsor's primary point of contact, and each member of the facilitation team are aware of the post-workshop action items, and the agreed upon order and timeline for completing those items.

8. POST-WORKSHOP ACTIONS

8.1. POST-WORKSHOP OUTPUTS

This chapter provides the details of how to develop each post-workshop output. Following the completion of the PAWSA workshop, the facilitation team should begin working on the following action items. Each item should be completed as soon as possible after the workshop ends while memories are still fresh. Action items include:

- perform a quality assurance check on Books 1, 4, and 5;
- analyse the workshop's quantitative results;

- complete the final attendees contact list;
- perform the workshop critique analysis; and
- prepare the PAWSA workshop report.

8.2. QUALITY ASSURANCE CHECK

The quality assurance (QA) process ensures that all results from Books 1, 4, and 5 are accurate. The day one QA check for Books 2 and 3 should already have been conducted, but if not, perform the QA check at this time. This task requires two people – usually the data entry person and another member of the facilitation team. Ideally, since the data entry person originally entered the numbers into the PAWSA software, the alternate person should check the entries while the data entry person verbally reads the numbers from the books. Obviously, all keypunching errors must be corrected. This cross-check ensures that the final results are 100% accurate.

8.3. ATTENDEES CONTACT LIST

After all participants and observers have provided the information requested on the attendees contact list, the data entry person should prepare the information electronically. During the workshop, the attendees contact list should be prepared, printed out, and validated by the attendees.

8.4. CRITIQUES

Upon completion of the two-day assessment, participants and observers, if interested, are asked to provide feedback on various aspects of the PAWSA process, facilities, and the presentation of material. The workshop critique is an invaluable tool used to enhance the process by incorporating beneficial comments, as well as provide the facilitation staff with an understanding of how they performed their duties associated with the workshop. The second benefit is especially helpful to the facilitation staff where an additional workshop is warranted.

8.5. WORKSHOP CRITIQUE ANALYSIS

After gathering the completed workshop critiques, a comprehensive review and analysis of the comments should be performed. Typically, the positive comments, although reviewed and usually encouraging, are not captured in this analysis. Constructive criticisms are the primary focus because they generally offer ways to improve the overall process; these comments become especially important when planning a subsequent PAWSA workshop.

Critique comments are separated into two categories: (1) recommended changes to the process and (2) terms and concepts that were not clear. While doing so, be as precise as possible, and enter the comments where they best fit based on the categories. Try to place all similar comments next to one another within the two categories, and then, if necessary, further classify the types of comments within each category. After all comments are entered, manually count similar comments to get an indication of the strength of feeling for any particular issue.

8.6. PAWSA WORKSHOP REPORT

The PAWSA workshop report can be an invaluable tool. Without some form of resulting documentation, there may be participants who feel as though the time spent in the PAWSA workshop was not justified. The PAWSA workshop report can provide that justification, providing each participant with a tangible item showing the results of the group's efforts over the entire two-day period.

The PAWSA workshop report should be finalized as soon as possible after the workshop finishes. The purpose of workshop report is to provide the sponsor with an overall sense of the results stemming from the PAWSA process. The report should summarize the PAWSA proceedings including specific risks identified, existing mitigations,

desired new mitigations, and the results of all quantitative evaluations. Based on the sponsor's understanding of organizational responsibilities and lines of authority, the PAWSA workshop report also should provide specific mitigation intervention recommendations and assign recommended responsibility for specific items.

The sponsor can use the report as a tool to inform other individuals/agencies/organizations about workshop results and garner support for risk mitigation actions, as well as to spark further discussion about risk reduction strategies with other stakeholders in the maritime community.

9. ROLES AND RESPONSIBILITIES

9.1. SPONSOR

The sponsor's roles and responsibilities include:

- assign primary point of contact;
The importance of, and workload imposed by, the PAWSA process often dictates that a senior member of the sponsor's staff be designated as the primary point of contact for overall co-ordination of activities before, during, and following the workshop.
- assign facilitation team members;
In addition to the sponsor's point of contact person, an appropriate facilitation team should be selected approximately two to three months in advance of the workshop.
- selection of participants (see guidance in chapter 4); and
- review results (see guidance in chapter 7).

9.2. PRIMARY POINT OF CONTACT

The primary point of contact's roles and responsibilities include:

- assist with logistical issues such as workshop facilities and equipment concerns;
- assist in the participant selection and homogenous team assignments;
- disseminate invitations and read ahead material;
- manage the day-to-day contacts leading up to the workshop including invitations responses;
- arrange for a waterway familiarization tour for facilitation team members as necessary. In cases where the facilitation team, specifically the facilitator and the note taker, are not familiar with the waterway, a familiarization tour should be provided for those individuals; and
- assist in drafting PAWSA workshop report.

9.3. FACILITATOR

The facilitator:

- must have a thorough understanding of the Waterway Risk Model and the PAWSA process.
- must have excellent public speaking skills, and be comfortable presenting technical information to a large group of waterway experts.
- must be properly briefed on the details regarding any controversial or politically sensitive issues specific to the waterway.



- presents workshop briefs, including the PAWSA background brief, and explain the Waterway Risk Model, including the six main risk categories and twenty-four risk factors.
- facilitates all discussion sessions.
- oversees completion of the five quantitative assessment Books;
- assists in the preparation of equipment and documentation materials for the risk assessment; and
- should attend a previous PAWSA workshop, if possible.

9.4. LOGISTICS COORDINATOR

The logistic coordinator:

- arranges for and prepares the workshop facility and all associated equipment requirements; and
- provides on-site logistical support during the workshop.

9.5. NOTE TAKER

The note taker:

- must have good listening and keyboarding skills;
- collects the qualitative input from participants during the waterway risk and mitigation discussions; and
- assists in the preparation of equipment and documentation materials for the risk assessment.

9.6. DATA ENTRY PERSON

The data entry person:

- must have excellent data entry computer skills;
- enters the quantitative data into the PAWSA Excel™ spreadsheet for each of the five books; and
- assists in the preparation of equipment and documentation materials for the risk assessment.

10. MATERIALS AND RESOURCES

The purpose of this section is to provide the user with a detailed understanding of the materials and equipment required for a PAWSA workshop.

Producing some of the materials requires several weeks of advance planning. Other materials, which are more administrative in nature, can be prepared a few days before the workshop, as long as the necessary resources are obtained in advance.

10.1. WATERWAY CHART(S)

10.1.1. SELECTING CHARTS

Chart(s) of the waterways are required to facilitate in-depth discussions of navigation issues. The chart(s) must cover the entire waterway area that is expected to be defined by workshop participants. Charts must cover the main waterway, its navigation channels, and any adjacent or converging waterways that impact vessel traffic.

Charts should be the latest edition, but do not need to be corrected to bring them up to date with notices to mariners. Chart(s) must be of adequate scale to provide details relevant to navigation such as waterway infrastructure (e.g., bridges, pipelines, etc.), commercial cargo and passenger facilities, and marinas, etc. The ideal scale will vary depending on the size of the waterway.

Ideally, all charts selected should be close to the same scale to minimize confusion during the discussion periods.

10.1.2. COLOUR CODING CHARTS

The facilitator will use the charts throughout the workshop, first to define the waterway and later to discuss specific areas of risk. As the participants identify areas where risks exist, the facilitator places coloured adhesive dots on the chart to mark those areas. The adhesive dots are color-coded to match the colours of the risk categories on the Waterway Risk Model. This provides a visual display of the waterway risks and helps participants stay focused on the risk category that is currently being discussed. Since the adhesive dots are difficult to remove, the chart(s) used for the workshop should not be the primary charts used by the sponsor's personnel, but chart(s) that can be discarded, if desired.

10.2. PARTICIPANT FOLDERS

A folder containing general information should be prepared for each participant and observer. This information, often referred to as session handouts, assists participants in understanding the PAWSA process and schedule, clarifies key points for completing Books 1 – 5, and provides space for notetaking throughout the workshop.

The following items are recommended for inclusion in the folders:

- Workshop agenda
- Facilitation team
- Waterway Risk Model
- Waterway Risk Model explanation
- Risk factor mitigations
- Waterway profile material

10.3. WATERWAY PROFILE MATERIAL

The waterway-specific data should be factual and presented in both graphic and text format. Ideally, five years of data depicts a good representation of the information requested in factual terms. In some locations, however, five years' worth of statistical data may not be available for various reasons, while in other locations more than five years of statistical data may be available. Therefore, provide as much specific data as possible based on the amount of existing information.

The sponsor should provide the participants with enough data to understand the nature of the risks in the waterway. Explanations and examples provided on the following pages identify the different types of data that are typically used during a PAWSA workshop. They should be used as a general guide for format when presenting the data. An alternate format may be used, as long as the same information is provided. More or less data can be used based on the extent of operations in the waterway under discussion.

10.3.1. DISTRIBUTIONS OF VESSEL TRANSITS BY VESSEL TYPE

Workshop participants will need data showing which types of vessels, proportionately, are transiting the waterways.

10.3.2. WATERWAY NAVIGATIONAL ATTRIBUTES

Many of the waterway's characteristics can be represented in a simple bulleted or narrative form. List the specifications pertaining to the following topics regarding the waterway's navigational characteristics:

- **Traffic:** briefly describe the amount of traffic using the waterway. Traffic includes deep draft vessels (e.g., ocean-going cargo vessels, passenger vessels, oil rigs), shallow draft vessels (e.g., tugs and tows, offshore supply vessels), commercial fishing vessels, and pleasure craft. Include information regarding traffic mix (i.e., is the waterway single use or multi-use (e.g., commercial / recreational) and, if the latter, do conflicts occur, and congestion issues (e.g., heavy volume at certain dates / times or areas of waterway).
- **Wind:** briefly describe the prevailing wind conditions in the area. Estimate the percentage of time that the wind blows greater than 20 knots sustained (would be tailored based on local conditions). Note any difficulties being encountered by waterway users due to wind effects.
- **Visibility Restrictions:** briefly describe how often restricted visibility conditions occur within the waterway. These conditions include all phenomena that prevent the waterway user from being able to see other traffic and aids to navigation (e.g., fog, rain squalls, snowstorms, smoke, etc.). Estimate the percentage of time that fog closes the waterway or that snowstorms hinder operations in winter.
- **Visibility Impediments:** briefly describe visibility impediments within the waterway area. These include all obstacles, other than previously listed, and naturally occurring features that prevent the waterway user from being able to see other traffic and aids to navigation (e.g., moored vessels, structures, background lighting, vegetation, etc.).
- **Water Movement:** describe current flow in the waterway. Be specific about the type and speed of current (e.g., flow with or across the channel at varying speeds, flow in different depth layers). Also include information about predominant seasonal currents (e.g., fast currents in spring with slower movement in the fall).
- **Obstructions:** briefly describe obstructions (e.g., ice, floating debris, fishing nets, etc.) in the waterway that affect safe vessel navigation. Estimate the percentage of time obstructions occur and note any difficulties encountered by waterway users due to obstructions.
- **Dimensions:** describe the width and depth of the channel and how much room there is for two vessels to pass each other. Identify areas where the width and depth changes and areas that are considered problem areas for vessel movement.
- **Bottom Type:** briefly describe the type of bottom in the waterway and any areas that concern waterway users. Bottom types include mud, silt, rock, sand, etc.
- **Waterway Configuration:** briefly describe any major bends in the waterway and their location. Describe the locations where traffic merges from converging waterways, and any locations where traffic regularly crosses the main ship channel.
- **Number of Passengers:** describe how many passengers transit the waterway on an annual basis, and describe how well prepared the waterway community is to deal with personnel injuries in the event passenger vessels are involved in a marine incident. Describe how well the waterway community is prepared to treat and/or evacuate passengers if the situation arises (e.g., incorporate data pertaining to the number of mass casualty drills held in the area). Types of passenger vessels that carry large numbers of passengers and should be considered include cruise ships, charter fishing boats, dinner cruises, military craft, ferries, etc.
- **Volume of Petroleum:** describe the volume of petroleum products coming in and out of the waterway in terms of the number of vessel / barge movements and the total volume being transported by water.
- **Volume of Chemicals:** describe the volume and type of chemicals being transported on the waterway. Specifically, state whether any chemical cargoes are moving in bulk.

- *Mobility*: describe how vulnerable the waterway is to impacts resulting from marine incidents involving critical infrastructure in or alongside the waterway; that is, those shoreside things critical to moving marine cargo throughout the waterway (e.g., terminals, pipelines, bridges, etc.). Describe the impacts if the channel cannot be used (e.g., waterway / channel closure resulting from a sunken ship, oil or hazardous material spill, etc.).

10.3.3. DISTRIBUTION OF CARGO TONNAGE

Compile a graphic representation in the form of a pie chart (in percentages) to proportionately show the amount and types of cargo carried throughout the waterway for the most recent year for which data is available.

10.3.4. CARGO TONNAGE HISTORY

Compile a graphic representation in the form of a bar chart using the total cargo tonnage statistics, by year, beginning with the earliest data available.

10.3.5. WATERWAY CASUALTY HISTORY

Providing waterway casualty statistics proves useful when discussing the consequences side of the Waterway Risk Model equation. Compile a graphic representation in the form of a bar chart using the number of casualties by type and year. The following types of casualties should be considered:

- Collisions
- Allisions
- Groundings
- Loss of vessel control
- Flooding / sinking
- Capsize
- Structural failure
- Fire/explosion

Historical casualty data should, at a minimum, focus on incidents that resulted in significant damage, or pollution, loss of life, or that affected vessel movement.

10.3.6. POLLUTION SPILL HISTORY

In an effort to provide participants with a comprehensive perspective of the waterway's pollution spill statistics, create a graphic representation in the form of a bar chart. Present the number of spills, by year, from the commercial vessels, recreational craft and shore facilities.

10.3.7. PLANNED AND ANTICIPATED CHANGES

In a simple bulleted or narrative form, list the known changes that may affect waterways management. Examples include things such as alterations to channel configuration due to bridge construction or repair, dredging, changes in shoreside facilities, changes in levels and/or nature of waterway activities, and forecasted traffic levels. The list should also highlight anticipated changes that may be under consideration, but have no firm commitment yet.

10.4. BOOKS 1 – 5

As described in the first chapter, a standard set of books is used to guide the participants' self-evaluation and pairwise choices throughout the workshop.

Prepare one copy of Books 1 – 5 for each team, plus one copy for each observer. Each Book is handed out and completed separately during the workshop; therefore, prepare Books 1 – 5 separately (i.e., do not bind the Books



together into full sets). Books 1 – 4 should be stapled; however, Book 5 is completed one page at a time and should not be stapled.

Write each team's number on the first page of each Book. Also write the team number in the space provided on the top-right corner of each page of Book 5. This will be important during the workshop in the event there are any questions about a particular team's data for which the facilitation team needs clarification. For easy distribution during the workshop, organize books in stacks by the book number and chronologically by team number (e.g., one stack of Book 1, another stack of Book 2, etc.).

Annex A to the manual contain Books 1 – 5, respectively, and are designed to be used directly or tailored to meet local needs.