



*Ballast Water Backlog
Ballast Water Reporting Form
(BWRF)*

DATA DICTIONNARY AND TRANSFORMATION PROCESS
Transport Canada

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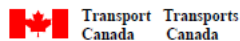
Typography

Every effort has been made to adhere to the following conventions:

- < > (or greater than and less than symbols) are delimiters to enclose textual strings in instructions. < > should not be included as part of the text. For example <CANADA> means CANADA.
- “ ” (or quotation marks) indicates a variable or parameter name. For example, “Date Value” refers to a parameter called Data Value.

Form Samples

Schedule 6 – Canadian Ballast Water Reporting Form



SCHEDULE 6 - CANADIAN BALLAST WATER REPORTING FORM

Amended Form YES NO

1. VESSEL INFORMATION		2. VOYAGE INFORMATION		3. BALLAST WATER USAGE AND CAPACITY		
Vessel name: Name		Arrival port: Halifax		Total ballast water on board:		
IMO number: 1234567		Arrival date (dd/mm/yyyy): 28/11/2013		Volume	Units	No. of tanks in ballast
Owner: Name		Agent: INCHCAPE SHIPPING SERV.		760	m ³	2
Type: OIL/CHEM		Last port: St. George	Country: Bermuda	Total ballast water capacity:		
Gross Tonnage: 23313	Year built: 2010	Next port:	Country:	Volume	Units	Total no. of tanks on vessel
Date of submission: 28/11/2013	Time: 1400	Next port: (2)	Country:	18108.4	m ³	14
Flag: LIBERIA		Next port: (3)	Country:			

4. BALLAST WATER MANAGEMENT

Total No. Ballast Water Tanks to be discharged:

How many tanks have undergone exchange? How many tanks have undergone alternate management?

Please specify alternative method(s) used, if any: N/A

If no ballast water management conducted, state reason why not: N/A

Ballast water management plan on board? YES NO Management plan implemented? YES NO

IMO ballast water guidelines on board [Resolution A. 868(20)]? YES NO Canadian ballast water regulations on board? YES NO Date October 2010

5. BALLAST WATER HISTORY: RECORD ALL TANKS. (BW SOURCES are the last uptakes prior to any ballast water management practices.)

Tanks/ Holds List multiple sources/ tanks separately	TANK CAPACITY (m ³)	BW SOURCES		Current Volume (m ³)	BW MANAGEMENT PRACTICES								PROPOSED BW DIS-CHARGE			
		Date dd/mm/yyyy	Port or Lat. & Long.		Date dd/mm/ yyyy	Start Point Lat. & Long.	End Point Lat. & Long.	Used Volume (m ³)	% Exch	Method (ER/FT/ ALT)	Wave HT. (m)	Salinity (units) ppt	Date dd/mm/yyyy	Port or Lat. & Long.	Volume (m ³)	Salinity (units) ppt
FP	741.8	26/11/2013	St. George	140	27/11/2013	36-12.5N 064-03.5W	37-07.0N 063-56.0W	140	100	ER	1.0	30				
WT 1P	1483.4				11/11/2013	22-04.1N 085-55.5W	22-30.1N 086-25.7W	1383	100	ER	1.0	30				
WT 1S	1250.1				11/11/2013	22-30.1N 086-25.7W	22-49.3N 086-46.7W	1147	100	ER	1.0	30				
WT 2P	1482.1				11/11/2013	22-49.3N 086-46.7W	23-20.2N 087-22.6W	1457	100	ER	1.0	30				
WT 2S	1247.4				11/11/2013	23-20.2N 087-22.6W	23-59.0N 088-06.2W	1223	100	ER	1.0	30				

Ballast Water Tank Codes: Forepeak = FP, Aftpeak = AP, Double Bottom = DB, Wing = WT, Topside = TS, Cargo Hold = CH, Other = O, ER= Empty/Refill, FT=Flow Through, ALT= Alternate Method

6. Will water be added to any tanks containing only residual ballast and sediment, and then subsequently discharged into waters under Canadian jurisdiction? YES NO

7. If the answer to # 6 is “Yes”, has the residual ballast water been exposed to salinity conditions equivalent to ballast exchange? YES NO

8. RESPONSIBLE OFFICER'S NAME AND TITLE: C/OFF Michal

Figure 1: Schedule 6 Form Example

St. Lawrence Seaway Ballast Water Reporting Form



ST. LAWRENCE SEAWAY BALLAST WATER REPORTING FORM

Nov. 12, 2009

96 Hour Report (Canadian Requirement) 24Hour (U.S. requirement) AMENDED FORM Yes No

1. VESSEL INFORMATION	2. VOYAGE INFORMATION	3. BALLAST WATER USAGE AND CAPACITY
Vessel Name: Name	Arrival Port: HAMILTON	Specify Units Below (m ³) Total Ballast Water on Board: Volume Units No. of Tanks in Ballast
IMO Number: 1234567	Arrival Date (DD/MM/YYYY): 20/11/2013	
Owner: Name	Agent: ROBERT REFORD	Total Ballast Water Capacity: Volume Units Total No. of Tanks on Ship
Type: BULK CARRIER	Last Port: ANTWERP Country: BELGIUM	
GT: 22654 Year built: 2002	Next Port: CLEVELAND, OH Country: USA	195.9 m ³ 1
Date/Time of Submission: 10/11/2013 2000UTC	Next Port (2): DETROIT, MI Country: USA	
Flag: MARSHALL ISLANDS	Next Port (3): Country:	15473.3 m ³ 20 + 1CH

4. BALLAST WATER MANAGEMENT (see instructions) Total No. Ballast Water Tanks to be discharged: **1**
 How many tanks underwent exchange: **1** How many tanks underwent alternative management: **19**
 Please specify alternative method(s) used, if any: **UNDERWENT SALT WATER FLUSHING**
 If no ballast water management conducted, state reason why not: **12 upper stow tanks are blinded and separated from ballast system. Not used for ballast. Hold No.4 contains cargo.**
 Ballast water management plan on board? YES NO Management plan implemented? YES NO
 IMO ballast water guidelines on board (res. A.868(20)) YES NO CANADIAN BW Reg. Dated: 08/06/2006 USA 33CFR 151 Subpart C_Y D_Y

5. BALLAST WATER HISTORY: RECORD ALL TANKS. (BW Sources is last BW intakes prior BW Management practices)

Tanks/Holds List multiple sources/ tanks separately	TANK CAPACITY	BW SOURCES		CURRENT VOLUME (m ³)	BW MANAGEMENT PRACTICES							PROPOSED BW DISCHARGE				
		DATE DD/MM/YYYY	PORT or LAT. LONG.		DATE DD/MM/YYYY	Start Point Lat. & Long.	End Point Lat. & Long.	Used VOLUME (m ³)	% Exch	METHOD (ER/FT/ ALT)	WAVE HT. (m)	SALINITY (units) ppt	DATE DD/MM/YYYY	PORT or LAT. LONG.	VOLUME (m ³)	SALINITY (units) ppt
FP	1106.7	05/11/2013	ANTWERP	0.5	09/11/2013	47 57.7 N 011 10.5 W	47 22.3 N 013 31.1 W	442.7	40	ALT	4.5	36				
WT 1 P	298.1	31/10/2013	ROTTERDAM	0.3	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	178.9	60	ALT	4.5	36				
WT 1 S	298.1	31/10/2013	ROTTERDAM	0.5	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	178.9	60	ALT	4.5	36				
WT 2 P	339.8	17/10/2013	48 48.4 N 068 08.7 W	0.2	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	203.9	60	ALT	4.5	36				
WT 2 S	339.8	17/10/2013	48 48.4 N 068 08.7 W	0.5	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	203.9	60	ALT	4.5	36				

Ballast Water Tank Codes: Forepeak = FP, Aftpeak = AP, Double Bottom = DB, Wing = WT, Topside = TS, Cargo Hold = CH, Other = O, ER= Empty/Refill, FT=Flow Through, ALT= Alternate Method

6. Will water be added to any tanks containing only residual ballast and sediment, and then subsequently discharged during the same voyage? YES NO
 7. If the answer to # 6 is YES:
 a) Has the residual ballast water been exposed to salinity conditions equivalent to ballast exchange? YES NO
 8. RESPONSIBLE OFFICER'S NAME AND TITLE: **WALTER L. - CHIEF OFFICER**

Figure 2: Seaway Form Example

Tanks/Holds List multiple sources/ tanks separately	TANK CAPACITY	BW SOURCES		CURRENT VOLUME (m ³)	BW MANAGEMENT PRACTICES							PROPOSED BW DISCHARGE				
		DATE DD/MM/YYYY	PORT or LAT. LONG.		DATE DD/MM/YYYY	Start Point Lat. & Long.	End Point Lat. & Long.	Used VOLUME (m ³)	% Exch	METHOD (ER/FT/ ALT)	WAVE HT. (m)	SALINITY (units) ppt	DATE DD/MM/YYYY	PORT or LAT. LONG.	VOLUME (m ³)	SALINITY (units) ppt
FP	1106.7	05/11/2013	ANTWERP	0.5	09/11/2013	47 57.7 N 011 10.5 W	47 22.3 N 013 31.1 W	442.7	40	ALT	4.5	36				
WT 1 P	298.1	31/10/2013	ROTTERDAM	0.3	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	178.9	60	ALT	4.5	36				
WT 1 S	298.1	31/10/2013	ROTTERDAM	0.5	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	178.9	60	ALT	4.5	36				
WT 2 P	339.8	17/10/2013	48 48.4 N 068 08.7 W	0.2	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	203.9	60	ALT	4.5	36				
WT 2 S	339.8	17/10/2013	48 48.4 N 068 08.7 W	0.5	09/11/2013	47 44.5 N 012 01.6 W	47 31.4 N 012 55.4 W	203.9	60	ALT	4.5	36				

RESPONSIBLE OFFICER'S NAME AND TITLE: **CHIEF OFFICER** *Seipy Makino*

Figure 3 Multiple Page Seaway Form Example

Ballast Water Reporting Form – Data Points

Both the “Schedule 6 – Canadian Ballast Water Reporting Form” and the “St. Lawrence Seaway Ballast Water Reporting Form” have the same data points requirements, however, the location may vary based on which form and form version is being processed. These variances are the responsibility of the vendor to identify and accommodate. It should also be noted that some form versions may have additional information over and above what is detailed here and should be ignored.

Element	Properties
1. VESSEL INFORMATION	Section Header
Vessel name	No Processing required.
IMO Number	<p>This represents the International Maritime Organization (IMO) number of the vessel. The Ballast Water Information System translates this to VESSEL_ID. The user must search for the Vessel based on the IMO Number and then select the most recent Vessel record in order to add a BWRF to the system. The Vessel must exist.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes BWIS field: Vessel Search – IMO Number. BWIS DB Table: CM001_BALLAST_WATER_RPRTRNG_FRM BWIS DB Column: .VESSEL_ID, IMO_NO</p> <p>Transform Process</p> <ol style="list-style-type: none"> 1) Please provide all IMO numbers in a report titled <IMO Validations> to Transport Canada for verification. The report should include the BWRF Filename plus the following BWRF fields: “IMO”, “Vessel Name”, “Owner”, “Type”, “Gross Tonnage”, “Year Built” and “Flag”. 2) The report will be reviewed, updated and returned to the vendor with the corresponding IMO_NO and VESSEL_ID values to use during the Load process in the corresponding columns “TC IMO Number” and “TC VESSEL_ID”, respectively.
Owner	No Processing required.
Type	No Processing required.
Gross Tonnage	No Processing required.
Year built	No Processing required.

Date of submission	<p>The submission date. This date does not have a date format specified on the form and may have the time embedded; therefore, special processing is required.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes BWIS field: Date/Time of Submission BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: FORM_SUBMITTED_DTE + Time UTC</p> <p>Processing – Extract Date</p> <ol style="list-style-type: none">1) Extract the string after 'Date of submission'.2) Scan and replace <.> and <,> with </>.3) Scan and replace <:> with a space.4) Removing leading and trailing spaces.5) Proceed to Transform Process using left(string,1,10) as "Current Value". <p>Transform Process</p> <ol style="list-style-type: none">1) Do Date Transform Process ("Current Value", <Date of Submission>).
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Time UTC	<p>The Submission Time. The Time may be embedded in Date of Submission; therefore, special processing is required.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes BWIS Field: Date of Submission Time fields. BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: Date of submission + FORM_SUBMITTED_DTE</p> <p>Processing – Extract Time.</p> <ol style="list-style-type: none"> 1) Extract the string after 'Date of submission'. 2) Scan and replace <.> and <,> with </>. 3) Scan and replace <:> with a space. 4) Removing leading and trailing spaces. 5) Remove/delete first 10 characters (this is the date). 6) Scan and delete all non numeric values including spaces. The remainder should be the time. 7) Proceed to Transform Process using the remaining string as "Current Value". <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Time Transform Process ("Current Value", <Date Of Submission Time>).
Flag	No Processing required.
2. VOYAGE INFORMATION	Section Header

Arrival port	<p>The Arriving Port. In BWIS port name and country are combined as port names and are not unique. Arrival Port is assumed to be in Canada.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes BWIS Field: Arrival Port*, Drop-down (With Unknown). BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column : ARRIVAL_PORT_CD</p> <p>Processing – Cleanup</p> <ol style="list-style-type: none"> 1) Extract Arrival Port from form and convert to uppercase as Current Value. 2) Remove/delete <CANADA> from Current Value if it exists. 3) Remove/delete the following characters from Current Value: Left bracket, right bracket and commas <(),>. 4) Remove/delete <(QUEBEC)> from the Current Value if it exists. 5) Remove/delete <N.S.> from the Current Value if it exists. 6) Remove leading and trailing spaces from Current Value. 7) Append < (CANADA)> to Current Value, being a space plus (CANADA). Using Figure 2: Seaway Form Example on page 4, Current Value would be HALIFAX (CANADA). 8) Proceed to Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process (“Current Value”, <Arrival Port>, TM008_PORT_WITH_COUNTRY Lookup).
Arrival date (dd/mm/yyyy))	<p>The expected/actual arrival date at the Arrival Port.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes BWIS Field: Arrival Date* BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: ARRIVAL_DTE</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract value from form as “Current Value”. 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Date Transform Process (“Current Value”, <Arrival Date>).

Agent	<p>The Vessel's Agent or Owner.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: No</p> <p>BWIS Field: Agent</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: AGENT_CD</p> <p>BWIS Field Types: Drop-down.</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process ("Current Value", <Agent>, TM002_AGENT Lookup).
Last port	<p>The last port visited. In BWIS the port name and country are combined as port names are not unique. On the BWRP the Port and Country are two fields, as such processing is required.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Last Port*, Drop-down (With Unknown).</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: LAST_PORT_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract the Last Port from the form as "Current Value" and convert to uppercase. 2) Extract and append the Last Port's corresponding country to "Current Value" delimited by () and proceeded with a space, also convert to uppercase. Using Figure 2: Seaway Form Example on page 4, the processed value would be ANTWERP (BELGIUM). 3) Do Transform Process using "Current Value". <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process ("Current Value", <Last Port>, TM008_PORT_WITH_COUNTRY Lookup).
Country	No Processing required.

Next port	<p>The Next Port to be visited. This is not always known.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Next Port*, Drop-down (With Unknown).</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: NEXT_PORT_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract the Next Port from the form as "Current Value" and convert to uppercase. 2) Remove any textual values that imply the port was not available, eg: <TBA>, <TO ORDER>, <UNKNOWN>, <NOT FIXED>. 3) If "Current Value" is blank set "Current Value" to <UNKNOWN> and proceed to Transform Process using "Current Value". (Note, the UNKNOWN row in the Port & Country Lookup does not have a Country). 4) Extract and append the Last Port's corresponding country to "Current Value" delimited by () and proceeded with a space, also convert to uppercase. See Last Port above for an example. 5) Do Transform Process using "Current Value". <p>Transform Process</p> <p>Do Lookup Transform Process ("Current Value", <Next Port>, TM008_PORT_WITH_COUNTRY Lookup).</p>
Country	<ol style="list-style-type: none"> 1) No Processing required.

Next port (2)	<p>The Next Port (2) to be visited. This is not always known.</p> <p>BWIS Particulars BWIS Mandatory: No BWIS Field: Next Port (2), Drop-down (With Unknown). BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: NEXT_PORT2_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract the Next Port (2) from the form as “Current Value” and convert to uppercase. 2) Remove any textual values that imply the port was not available, eg: <TBA>, <TO ORDER>, <UNKNOWN>, <NOT FIXED>. 3) If “Current Value” is blank end processing – leave blank. 4) Extract and append the Last Port (2)’s corresponding country to “Current Value’ delimited by () and proceeded with a space, also convert to uppercase. See Last Port above for an example. 5) Do Transform Process using “Current Value”. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process (“Current Value”, <Next Port (2)>, TM008_PORT_WITH_COUNTRY_Lookup).
Country	<ol style="list-style-type: none"> 1) No Processing required.
Next port (3)	<p>The Next Port (3) to be visited. This is not always known.</p> <p>BWIS Particulars BWIS Mandatory: No BWIS Field: Next Port (3), Drop-down (With Unknown) BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: NEXT_PORT3_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract the Next Port (3) from the form as “Current Value” and convert to uppercase. 2) Remove any textual values that imply the port was not available, eg: <TBA>, <TO ORDER>, <UNKNOWN>, <NOT FIXED>. 3) If “Current Value” is blank end processing – leave blank. 4) Extract and append the Last Port (2)’s corresponding country to “Current Value’ delimited by () and proceeded with a space, also convert to uppercase. See Last Port above for an example. 5) Do Transform Process using “Current Value”. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process (“Current Value”, <Next Port (3)>, TM008_PORT_WITH_COUNTRY_Lookup).
Country	<ol style="list-style-type: none"> 1) No Processing required.

3. BALLAST WATER USAGE AND CAPACITY	Section Header
Total ballast water on board	Section Sub Header
Volume	<p>The volume of ballast water on board.</p> <p>BWIS Particulars</p> <p style="padding-left: 40px;">BWIS Mandatory: Yes BWIS Field: Volume* BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: WATER_BALLAST_VOLUME_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Do Transform Process using "Current Value". <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Volume Transform Process ("Current Value", <Volume On Board>).
Units	<p>The measurement unit.</p> <p>BWIS Particulars</p> <p style="padding-left: 40px;">BWIS Mandatory: Yes BWIS Field: next to Volume, Drop-down (With Unknown) BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM BWIS DB Column: WATER_BALLAST_VOLUME_UNIT_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process ("Current Value", <Units On Board>, Error! Reference source not found.)

<p>No. of tanks in ballast</p>	<p>The number of tanks with ballast water, excluding drinkable water tanks.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: No. of Tanks in Ballast*</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_BALLAST_TANKS_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Tanks Transform Process ("Current Value", <No Tanks On Board>).
<p>Total ballast water capacity</p>	<p>Section Sub Header</p>
<p>Volume</p>	<p>The volume of ballast water on board.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Volume*</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_CAPACITY_VOLUME_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Scan "Current Value" from right to left search for the first comma or period. <ol style="list-style-type: none"> a. If period found, proceed to step 3. b. For first comma found, convert to a period and proceed to step 3. 3) Do Transform Process using "Current Value". <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Volume Transform Process ("Current Value", <Volume Capacity>).

Units	<p>The measurement unit.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: next to Volume, Drop-down (With Unknown)</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_CAPACITY_VOLUME_UNIT_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as “Current Value”. 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process (“Current Value”, <Units Capacity>, Error! Reference source not found.)
Total No. of tanks on vessel	<p>The number of tanks.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: No. of Tanks on Vessel*</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_CAPACITY_TANKS_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as “Current Value”. 2) Do Transform Process. <p>Transform Process</p> <p>Do Tanks Transform Process (“Current Value”, < No. of Tanks on Vessel >).</p>
4. BALLAST WATER MANAGEMENT	Section Header

<p>Total No. Ballast Water Tanks to be discharged</p>	<p>The number of tanks.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Total No. Ballast Water Tanks to be discharged*</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_TANKS_DISCHARGED_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as “Current Value”. 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Tanks Transform Process (“Current Value”,< Total No. Ballast Water Tanks to be discharged >).
<p>How many tanks have undergone exchange?</p>	<p>The number of tanks.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Total No. Tanks That Underwent Exchange*</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_TANKS_EXCHANGED_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as “Current Value”. 2) Do Transform Process. <p>Transform Process</p> <p>Do Tanks Transform Process (“Current Value”,< Total No. Tanks That Underwent Exchange >).</p>

<p>How many tanks have undergone alternate management?</p>	<p>The number of tanks.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Total No. Tanks That Underwent Alternative Management*</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: WATER_TANKS_ALTERNATIVE_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as “Current Value”. 2) Do Transform Process. <p>Transform Process</p> <p>Do Tanks Transform Process (“Current Value”, <Total No. Tanks That Underwent Alternative Management>).</p>
<p>Please specify alternative method(s) used, if any</p>	<p>The alternative method used.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: No</p> <p>BWIS Field: Specify Alternative Method(s) Used, If Any Drop-down (With “None”)</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: ALTERNATE_EXCHANGE_METHOD_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as “Current Value” and convert to uppercase. 2) If “Current Value” is not blank, do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process (“Current Value”, <Alternative Method Used>, Error! Reference source not found.).

<p>If no ballast water management conducted, state reason why not</p>	<p>The reason.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: No</p> <p>BWIS Field: If no ballast water management conducted, state reason why not, Drop-down (With "Not Provided")</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: ALTERNATE_EXCHANGE_REASON_CD</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value" and convert to uppercase. 2) If "Current Value" is not blank do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Lookup Transform Process ("Current Value", <Alternative Reason>, Error! Reference source not found.).
<p>Ballast water management plan on board?</p>	<p>Whether a Ballast Water Management Plan is on board. Usually an X is placed in the appropriate box; however, sometimes an X is placed next to the appropriate box. Vendor must account for both circumstances.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Ballast water management plan on board?*</p> <p>Yes and No radio buttons</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: MANAGEMENT_PLAN_ONBOARD_IND</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Set both "Yes Value" and "No Value" to 0. 2) Extract Yes data from form by determining if an X is placed in or next to the corresponding Yes checkbox. If an X is present set "Yes Value" to 1. 3) Extract No data from form by determining if an X is placed in or next to the corresponding No checkbox. If an X is present set "No Value" to 1. 4) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Yes or No Transform Process ("Yes Value", "No Value", <BW management plan on board>).

<p>Management plan implemented?</p>	<p>Whether the Management Plan is implemented. Usually an X is placed in the appropriate box; however, sometimes an X is placed next to the appropriate box. Vendor must account for both circumstances.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Management plan implemented?*</p> <p>Yes and No radio buttons</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: MANAGEMENT_PLAN_IMPLEMENT_IND</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Set both "Yes Value" and "No Value" to 0. 2) Extract Yes data from form by determining if an X is placed in or next to the corresponding Yes checkbox. If an X is present set "Yes Value" to 1. 3) Extract No data from form by determining if an X is placed in or next to the corresponding No checkbox. If an X is present set "No Value" to 1. 4) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Yes or No Transform Process ("Yes Value", "No Value", < Management plan implemented>.
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<p>IMO ballast water guidelines on board [Resolution A.868 (20)]?</p>	<p>Whether the BW guidelines are on board. Usually an X is placed in the appropriate box; however, sometimes an X is placed next to the appropriate box. Vendor must account for both circumstances.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: IMO ballast water guidelines on board - res. A.868(20)?*, Yes and No radio buttons.</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: IMO_GUIDELINE_ONBOARD_IND</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Set both "Yes Value" and "No Value" to 0. 2) Extract Yes data from form by determining if an X is placed in or next to the corresponding Yes checkbox. If an X is present set "Yes Value" to 1. 3) Extract No data from form by determining if an X is placed in or next to the corresponding No checkbox. If an X is present set "No Value" to 1. 4) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Yes or No Transform Process ("Yes Value", "No Value", < BW Guidelines On Board >.
<p>Canadian ballast water regulations on board? and Date.</p>	<p>Not processed. Data not captured in Database.</p>
<p>Canadian BW Reg. Dated (On Seaway BW form ONLY)</p>	<p>Not processed. Data not captured in Database. On Seaway BW form only</p>
<p>USA 33CFR 151 Subpart C</p>	<p>Not processed. Data not captured in Database. On Seaway BW form only</p>
<p>USA 33CFR 151 Subpart D</p>	<p>N/A... Data not captured in Database. On Seaway BW form only</p>

<p>5. BALLAST WATER HISTORY: RECORD ALL TANKS (BW SOURCES are the last uptakes prior to any ballast water management practices)</p>	<p>Object Type: Section Header</p> <p>This section consists of a table with six sub-sections for each tank on board. There is a row for each tank. Total number of tanks is normally within 10 to 30, but the total can exceed 60 in some instances.</p>
<p>Tanks/Holds</p> <p>List multiple sources/tanks separately</p>	<p>Tanks/Holds code identifying each tank consisting of Tank Type, Number and Location. Freeform text. If Tank/Hold is blank do not process related tank fields on that row. Tank/Hold being blank indicates there are no more tanks to process.</p> <p>BWIS Particulars</p> <p style="padding-left: 40px;">BWIS Mandatory: Yes</p> <p style="padding-left: 40px;">BWIS Field: Tank Description</p> <p style="padding-left: 40px;">BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p style="padding-left: 40px;">BWIS DB Column: TANK_INFO_TXT</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract value and trim as "Current Value". 2) If "Current Value" blank stop processing tanks. 3) Use "Current Value".
<p>TANK CAPACITY (m3)</p>	<p>Not processed. Data not captured in Database.</p>
<p>BW SOURCES</p>	<p>Section Sub Header</p>

Date dd/mm/yyyy	<p>The date of ballast water uptake.</p> <p>BWIS Particulars</p> <ul style="list-style-type: none">BWIS Mandatory: YesBWIS Field: Date (yyyy mm dd)*BWIS DB Table: CM002_BALLAST_WATER_TANKBWIS DB Column: SOURCE_DTE <p>Processing:</p> <ol style="list-style-type: none">1) Extract date from form as "Current Value".2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none">1) Do Date Transform Process (Date Value, Field Name) ("Current Value", <Source Date>).
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Port or Lat. & Long.	<p>Either the port or the latitude & longitude coordinates where the ballast water source water was loaded.</p> <p>How Latitude and Longitude are specified varies greatly given the forms are freeform. Latitude and Longitude can be entered in any order, can be on the same line separated by a character (such as /) or on different lines. Latitude and Longitude can be specified with the cardinal points (N, S, E, W) at the beginning or at the end of the value. Latitude and Longitude can be specified with or without the seconds and uses a variety of separation characters including spaces, periods, or dashes.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes if BW Source Date exists</p> <p>BWIS Fields:</p> <p style="padding-left: 40px;">Port, Drop-down (With Unknown)</p> <p style="padding-left: 40px;">Latitude, (Degrees, Minutes, Seconds, Cardinal)</p> <p style="padding-left: 40px;">Longitude, (Degrees, Minutes, Seconds, Cardinal)</p> <p>BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p>BWIS DB Column: respectively,</p> <p style="padding-left: 40px;">SOURCE_PORT_CD,</p> <p style="padding-left: 40px;">SOURCE_LATITUDE_NUM</p> <p style="padding-left: 40px;">SOURCE_LONGITUDE_NUM</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form, convert to uppercase and remove leading and trailing spaces and CRLFcharacters as "Current Value". 2) If "Current Value" does not contain any digits (0..9) do Lookup Transform Process (Data Value, Field Name, Lookup Data) ("Current Value", <Source Port>, Error! Reference source not found.), exit. 3) Replace all other characters other than digits (0..9) and N, S, E, W with periods. Remove Leading and Trailing periods. 4) Logically separate "Current Value" into "Latitude" and "Longitude" values. (Latitude has "N" or "S", Longitude has "E" or "W"). 5) Do Latitude Transform Process ("Latitude", <Source Latitude>). 6) Do Longitude Transform Process ("Longitude", <Source Longitude>).
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<p>Current Volume (m3)</p>	<p>Indicates the source volume of ballast water uptake.</p> <p>BWIS Particulars</p> <p style="padding-left: 40px;">BWIS Mandatory: Yes BWIS Field: Volume* BWIS DB Table: CM002_BALLAST_WATER_TANK BWIS DB Column: SOURCE_VOLUME_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Do Transform Process using "Current Value". <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Volume Transform Process ("Current Value", <Tank Current Volume>).
<p>BW MANAGEMENT PRACTICES</p>	<p>Object Type: Sub-Section Header</p>
<p>Date dd/mm/yyyy</p>	<p>The exchange date.</p> <p>BWIS Particulars</p> <p style="padding-left: 40px;">BWIS Mandatory: No BWIS Field: Date (yyyy mm dd) BWIS DB Table: CM002_BALLAST_WATER_TANK BWIS DB Column: EXCHANGE_DTE</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract date from form as "Current Value". 2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Date Transform Process (Date Value, Field Name) ("Current Value", <Management Date>).
<p>Start Point</p> <p>Lat. & Long.</p>	<p>Coordinates where ballast water exchange was started.</p> <p>How Latitude and Longitude are specified varies greatly given the forms are freeform. Latitude and Longitude can be entered in any order, can be on the same line separated by a character (such as /) or on different lines. Latitude and Longitude can be specified with the cardinal points (N, S, E, W) at the beginning or at the end of the value. Latitude and Longitude can be specified with or without the seconds and uses a variety of separation characters including spaces, periods, or dashes.</p> <p>The vendor will need to extract and cleanse the raw data in order to process it correctly.</p>

	<p>BWIS Particulars</p> <p>BWIS Mandatory: Yes if any of the other Management Practices fields have been entered</p> <p>BWIS Fields:</p> <ul style="list-style-type: none">Starting Latitude, (Degrees, Minutes, Seconds, Cardinal)Starting Longitude, (Degrees, Minutes, Seconds, Cardinal) <p>BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p>BWIS DB Column:</p> <ul style="list-style-type: none">EXCHANGE_START_LATITUDE_NUMEXCHANGE_START_LONGITUDE_NUM <p>Processing:</p> <ol style="list-style-type: none">1) Extract data from form, convert to uppercase and remove leading and trailing spaces and CRLF characters as "Current Value".2) Do Latitude and Longitude Transform Process ("Latitude", <Starting>).
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<p>End Point</p> <p>Lat. & Long.</p>	<p>Coordinates where ballast water exchange process ended.</p> <p>How Latitude and Longitude are specified varies greatly given the forms are freeform. Latitude and Longitude can be entered in any order, can be on the same line separated by a character (such as /) or on different lines. Latitude and Longitude can be specified with the cardinal points (N, S, E, W) at the beginning or at the end of the value. Latitude and Longitude can be specified with or without the seconds and uses a variety of separation characters including spaces, periods, or dashes.</p> <p>The vendor will need to extract and cleanse the raw data in order to process it correctly.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes if any of the other Management Practices fields have been entered</p> <p>BWIS Fields:</p> <p style="padding-left: 40px;">Ending Latitude, (Degrees, Minutes, Seconds, Cardinal)</p> <p style="padding-left: 40px;">Ending Longitude, (Degrees, Minutes, Seconds, Cardinal)</p> <p>BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p>BWIS DB Column:</p> <p style="padding-left: 40px;">EXCHANGE_END_LATITUDE_NUM</p> <p style="padding-left: 40px;">EXCHANGE_END_LONGITUDE_NUM</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form, convert to uppercase and remove leading and trailing spaces and CRLF characters as "Current Value". 2) Do Latitude and Longitude Transform Process ("Current Value",<Ending>).
<p>Used volume (m3)</p>	<p>Indicates the volume of ballast water was changed.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Volume</p> <p>BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p>BWIS DB Column: EXCHANGE_VOLUME_NBR</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form as "Current Value". 2) Do Transform Process using "Current Value". <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Volume Transform Process ("Current Value",<Tank Current Volume>).

<p>% Exch</p>	<p>Indicates the percent of ballast water volume exchanged.</p> <p>BWIS Particulars BWIS Mandatory: No BWIS Field: Percent Exchanged BWIS DB Table: CM002_BALLAST_WATER_TANK BWIS DB Field: EXCHANGE_PERCENT_NBR</p> <p>Processing: 1) Extract data from form, convert to uppercase, and then trim as "Current Value". 2) Do Transform Process.</p> <p>Transform Process : 1) Do Percent Exchanged Transform Process ("Current Value",<Percent Exchanged>).</p>
<p>Method (ER/FT/ALT)</p>	<p>Describes the management method used for ballast water exchange for the tank.</p> <p>BWIS Particulars BWIS Mandatory: No BWIS Field: Method, Drop-down (With "Unknown") BWIS DB Table: CM002_BALLAST_WATER_TANK BWIS DB Column: EXCHANGE_METHOD_CD</p> <p>Processing: 1) Extract data from form, convert to uppercase, and then trim as "Current Value". 2) Do Transform Process.</p> <p>Transform Process 1) Do Lookup Transform Process (Data Value, Field Name, Lookup Data)("Current Value",<Exchange Method>, Error! Reference source not found.).</p>

Wave HT.(m)	<p>The wave height (in metres) at the time of the ballast water exchange.</p> <p>BWIS Particulars BWIS Mandatory: No BWIS Field: Wave Height (2 fields, height value and unit) BWIS DB Table: CM002_BALLAST_WATER_TANK BWIS DB Column: EXCHANGE_WAVE_HEIGHT_NBR EXCHANGE_WAVE_HEIGHT_UNIT_CD (always <M>)</p> <p>Processing: 1) Extract data from form, convert to uppercase, and then trim as "Current Value". 2) Do Transform Process.</p> <p>Transform Process: 1) Do Wave Height Transform Process ("Current Value", <Wave Height>).</p>
Salinity	<p>The salinity of ballast water at the time of exchange and unit of measure. The unit of measure is specified in the column header as either PPT or SG.</p> <p>BWIS Particulars BWIS Mandatory: No BWIS Field: Salinity, 2 fields, salinity number, and unit of measure (Drop-down with "Unknown") BWIS DB Table: CM002_BALLAST_WATER_TANK BWIS DB Column: EXCHANGE_SALINITY_NBR EXCHANGE_SALINITY_UNIT_CD</p> <p>Processing: 1) Scan header to determine Unit of Measurement. If header contains <SP> or <sp> set "Unit of Measure" = <S>, otherwise set "Unit of Measure" = <P>. 2) Extract salinity data from form, convert to uppercase, and then trim as "Current Value". 3) Do Transform Process.</p> <p>Transform Process : 1) Do Salinity Transform Process (Current Value, <Management Salinity>, "Unit of Measure").</p>
PROPOSED BW DISCHARGE	Object Type: Sub-Section Header

Date dd/mm/yyyy	<p>The proposed discharge date.</p> <p>BWIS Particulars</p> <ul style="list-style-type: none">BWIS Mandatory: NoBWIS Field: Date (yyyy mm dd)BWIS DB Table: CM002_BALLAST_WATER_TANKBWIS DB Column: DISCHARGE_DTE <p>Processing:</p> <ol style="list-style-type: none">1) Extract date from form as "Current Value".2) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none">1) Do Date Transform Process (Date Value, Field Name) ("Current Value", <Tank Discharge Date>).
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Port or Lat. & Long.	<p>Either the port or the latitude & longitude coordinates where the ballast water source water was discharged.</p> <p>How Latitude and Longitude are specified varies greatly given the forms are freeform. Latitude and Longitude can be entered in any order, can be on the same line separated by a character (such as /) or on different lines. Latitude and Longitude can be specified with the cardinal points (N, S, E, W) at the beginning or at the end of the value. Latitude and Longitude can be specified with or without the seconds and uses a variety of separation characters including spaces, periods, or dashes.</p> <p>The vendor will need to extract and cleanse the raw data in order to process it correctly.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: No</p> <p>BWIS Fields:</p> <p style="padding-left: 40px;">Port, Drop-down (With Unknown)</p> <p style="padding-left: 40px;">Latitude, (Degrees, Minutes, Seconds, Cardinal)</p> <p style="padding-left: 40px;">Longitude, (Degrees, Minutes, Seconds, Cardinal)</p> <p>BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p>BWIS DB Column: respectively,</p> <p style="padding-left: 40px;">DISCHARGE_PORT_CD,</p> <p style="padding-left: 40px;">DISCHARGE_LATITUDE_NUM</p> <p style="padding-left: 40px;">DISCHARGE_LONGITUDE_NUM</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract data from form, convert to uppercase and remove leading and trailing spaces and CRLF characters as "Current Value". 2) If "Current Value" does not contain any digits (0..9) do Lookup Transform Process (Data Value, Field Name, Lookup Data) ("Current Value", <Source Port>, Error! Reference source not found.), exit. 3) Replace all other characters other than digits (0..9) and N, S, E, W with periods. Remove Leading and Trailing periods. 4) Logically separate "Current Value" into "Latitude" and "Longitude" values. (Latitude has "N" or "S", Longitude has "E" or "W"). 5) Do Latitude Transform Process ("Latitude", <Discharge Latitude>). 6) Do Longitude Transform Process ("Longitude", <Discharge Longitude>).
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<p>6. Will water be added to any tanks containing only residual ballast and sediment, and then subsequently discharged into waters under Canadian jurisdiction?</p>	<p>Whether water will be added. Usually an X is placed in the appropriate box; however, sometimes an X is placed next to the appropriate box. Vendor must account for both circumstances.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Will water be added to any tanks containing only residual ballast and sediment, and then subsequently discharged during the same voyage? Yes and No radio buttons.</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: ADDITION_DISCHARGE_IND</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Set both "Yes Value" and "No Value" to 0. 2) Extract Yes data from form by determining if an X is placed in or next to the corresponding Yes checkbox. If an X is present set "Yes Value" to 1. 3) Extract No data from form by determining if an X is placed in or next to the corresponding No checkbox. If an X is present set "No Value" to 1. 4) Do Transform Process. <p>Transform Process</p> <p>Do Yes or No Transform Process ("Yes Value", "No Value", <Will water be added to any tanks>).</p>
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<p>7. If the answer to #6 is “Yes”, has the residual ballast water been exposed to salinity conditions equivalent to ballast exchange?</p>	<p>Whether residual ballast water has been exposed. Usually an X is placed in the appropriate box; however, sometimes an X is placed next to the appropriate box. Vendor must account for both circumstances.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Has the residual ballast water been exposed to salinity conditions equivalent to ballast exchange? Yes and No radio buttons.</p> <p>BWIS DB Table: CM001_BALLAST_WATER_RPRTNG_FRM</p> <p>BWIS DB Column: SALINITY_EQUIVALENCE_IND</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Set both “Yes Value” and “No Value” to 0. 2) Extract Yes data from form by determining if an X is placed in or next to the corresponding Yes checkbox. If an X is present set “Yes Value” to 1. 3) Extract No data from form by determining if an X is placed in or next to the corresponding No checkbox. If an X is present set “No Value” to 1. 4) Do Transform Process. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Yes or No Transform Process (“Yes Value”, “No Value”, <Residual Ballast Water Exposed>.
<p>8. RESPONSIBLE OFFICER’S NAME AND TITLE</p>	<p>The Responsible officer’s name and title.</p> <p>BWIS Particulars</p> <p>BWIS Mandatory: Yes</p> <p>BWIS Field: Responsible Officer’s name and title</p> <p>BWIS DB Table: CM002_BALLAST_WATER_TANK</p> <p>BWIS DB Column: OFFICER_NM</p> <p>Processing:</p> <ol style="list-style-type: none"> 1) Extract value and trim as “Current Value”. 2) Use “Current Value”. <p>Transform Process</p> <ol style="list-style-type: none"> 1) Do Yes or No Transform Process (“Yes Value”, “No Value”, <Residual Ballast Water Exposed>.

Transform Processes

This section contains standard transformation instructions. The Objective of the Transform processes is to ensure the form's data values are acceptable for the Post-Verification and Data Load processes. The form's data values are checked against the specified conditions listed. If the checks pass, the value should be used during the Post-Verification and Data Load processes, or as instructed in the transform process. If the checks fail, the value should be added to the Exception report for correction by Transport Canada. Transport Canada will review each Exception report and return it to the vendor with the appropriate action to take or the replacement value to use.

Lookup Transform Process (Data Value, Field Name, Lookup Data)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Vendor should add, for each unique Field Name, the following additional fields to accommodate this process:

"Field Name"+<TCPK>: Will store the Transport Canada Lookup Data's PK found per this process.

"Field Name" +<TCVALUE>: Will store the Transport Canada Lookup Data's English Value found per this process.

Processing Logic as follows,

- 1) Convert "Data Value" to uppercase for comparison purposes.
- 2) If "Data Value" is blank/null, do Exception Report.
- 3) Search provided "Lookup Data" for corresponding English or French Value.
 - a. If found,
 - i. Save the PK column value to "Field Name"+<TCPK> column.
 - ii. Save the ENGLISH_VALUE column value to "Field Name"+<TCVALUE> column.
 - b. If not found, do Exception Report.

Exception Report:

Exception Report Name: "Field Name".

Columns:

BWRF Filename, "Field Name", Form Field Value, TCPK, TCValue.

Exit processing.

The Exception Report will be returned to the vendor with the "TCPK" and "TCValue" updated with the values to be used during the Post-Verification process.

Date Transform Process (Date Value, Field Name)

The Objective is to transform the "Date Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) Search and replace months, as per the following:
 - Search for 'JAN.', replace with '01'.
 - Search for 'FEB.', replace with '02'.
 - Search for 'MAR.', replace with '03'.
 - Search for 'APR.', replace with '04'.
 - Search for 'MAY', replace with '05'.
 - Search for 'JUN.', replace with '06'.
 - Search for 'JUL.', replace with '07'.
 - Search for 'AUG.', replace with '08'.

- Search for 'SEP.', replace with '09'.
 - Search for 'SEPT.', replace with '09'.
 - Search for 'OCT.', replace with '10'.
 - Search for 'NOV.', replace with '11'.
 - Search for 'DEC.', replace with '12'.
 - Search for 'JAN', replace with '01'.
 - Search for 'FEB', replace with '02'.
 - Search for 'MAR', replace with '03'.
 - Search for 'APR', replace with '04'.
 - Search for 'MAY', replace with '05'.
 - Search for 'JUN', replace with '06'.
 - Search for 'JUL', replace with '07'.
 - Search for 'AUG', replace with '08'.
 - Search for 'SEP', replace with '09'.
 - Search for 'SEPT', replace with '09'.
 - Search for 'OCT', replace with '10'.
 - Search for 'NOV', replace with '11'.
 - Search for 'DEC', replace with '12'.
- 2) Scan and replace '.' and ',' with '/'.
 - 3) Has to be a valid date in the format of dd/mm/yyyy. If not, do Exception report.
 - 4) If year is < 2005, do Exception report.
 - 5) If date is in the future, do Exception report.

Exception Report:

Exception Report Name: <Field Name parameter>.

Columns: BWRP Filename, "Field Name", Form Field Value, TC Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC Value" column containing the value to be used by the vendor during the Post-Verification and Data Load processes.

Time Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If Time > 2359, do Exception report.
- 2) If Time < 0000, do Exception report.

Exception Report:

Exception Report Name: <Field Name parameter>

Columns:

BWRP Filename, "Field Name", Form Field Value, TC Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC Value" updated with the value to be used by the vendor during the Post-Verification and Data Load processes.

Latitude and Longitude Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process. This preprocesses Latitude and Longitude.

Processing Logic as follows:

- 1) IF "Current Value" = blank, exit.
- 2) If "Current Value" does not contain any digits (0..9), do Exception Report.
- 3) If length of "Current Value" > 25, do Exception Report.
- 4) Replace all other characters other than digits (0..9) and N, S, E, W with periods. Remove Leading and Trailing periods.
- 5) Logically separate "Current Value" into "Latitude" and "Longitude" values. (Latitude has "N" or "S", Longitude has "E" or "W"). If impossible, do Exception Report.
- 6) Do [Latitude Transform Process](#) ("Latitude", "Field Name" + <Latitude>).
- 7) Do [Longitude Transform Process](#) ("Longitude", "Field Name" + <Longitude>).

Exception Report:

Exception Report Name: <Preprocess > + "Field Name" being processed.

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Degrees Value, TC Minutes Value, TC Seconds Value, TC Cardinal Value, TC Decimal Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC ..." values updated with the values to be used by the vendor during the Post-Verification process.

Latitude Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Vendor should add, for each unique field name, the following additional fields to accommodate this process:

"Field Name" + TC Degrees Value: The Transport Canada Latitude Degrees.

"Field Name" + TC Minutes Value: The Transport Canada Latitude Minutes.

"Field Name" + TC Seconds Value: The Transport Canada Latitude Seconds.

"Field Name" + TC Cardinal Value: The Transport Canada Latitude Direction.

"Field Name" + TC Decimal Value: The Transport Canada Decimal Value needed for importation into the database.

Processing Logic as follows:

- 1) Example "Data Value", <N.58.46.5> or <58.46.5.N>.
- 2) If "Data Value" is blank, do Exception Report – exit.
- 3) Using Example "Data Value", "Field Name" + TC Cardinal Value would get set to 'N'.
- 4) Using Example "Data Value", "Field Name" + TC Degrees Value would get set to 58.
- 5) Using Example "Data Value", "Field Name" + TC Minutes Value would get set to 46.
- 6) Using Example "Data Value", "Field Name" + TC Seconds Value would get set to 5. If blank set to 00.
- 7) If "Field Name" + TC Cardinal Value not 'N' or 'S' then do Exception Report and exit.
- 8) If "Field Name" + "TC Degrees Value" is not numeric or > 90, do Exception Report.
- 9) If "Field Name" + "TC Minutes Value" is not numeric or > 59, do Exception Report.
- 10) If "Field Name" + "TC Seconds Value" is not numeric or > 59, do Exception Report.
- 11) Set "Field Name" + TC Decimal Value per conversion logic DMS to DEC Conversion on page 39.

Exception Report:

Exception Report Name: "Field Name" being processed.

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Degrees Value, TC Minutes Value, TC Seconds Value, TC Cardinal Value, TC Decimal Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC ..." values updated with the values to be used by the vendor during the Post-Verification process.

Longitude Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Vendor should add, for each unique field name, the following additional fields to accommodate this process:

"Field Name" + TC Degrees Value: The Transport Canada Latitude Degrees.

"Field Name" + TC Minutes Value: The Transport Canada Latitude Minutes.

"Field Name" + TC Seconds Value: The Transport Canada Latitude Seconds.

"Field Name" + TC Cardinal Value: The Transport Canada Latitude Direction.

"Field Name" + TC Decimal Value: The Transport Canada Decimal Value needed for importation into the database.

Processing Logic as follows:

- 1) Example "Data Value", <W.032.20.1> or <032.20.1.W>
- 2) If "Data Value" is blank do Exception Report– exit.
- 3) Using Example "Data Value", "Field Name" + TC Cardinal Value would get set to 'W'.
- 4) Using Example "Data Value", "Field Name" + TC Degrees Value would get set to 032.
- 5) Using Example "Data Value", "Field Name" + TC Minutes Value would get set to 20.
- 6) Using Example "Data Value", "Field Name" + TC Seconds Value would get set to 1. If blank set to 00.
- 7) If "Field Name" + TC Cardinal Value not 'W' or 'E', do Exception Report and exit.
- 8) If "Field Name" + "TC Degrees Value" not numeric or > 180, do Exception Report.
- 9) If "Field Name" + "TC Minutes Value" is not numeric or > 59, do Exception Report.
- 10) If "Field Name" + "TC Seconds Value" is not numeric or > 59, do Exception Report.
- 11) Set "Field Name" + TC Decimal Value per conversion logic DMS to DEC Conversion on page 39.

Exception Report:

Exception Report Name: "Field Name" being processed.

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Degrees Value, TC Minutes Value, TC Seconds Value, TC Direction Value, TC Decimal Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC ..." values updated with the values to be used by the vendor during the Post-Verification process.

Responsible Officer Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If value is blank, do Exception Report.
- 2) Must be > 0 and < 100. If not do Exception Report.

Exception Report:

Exception Report Name: "Field Name"

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC Value" updated with the value to be used by the vendor during the Post-Verification process.

Tanks Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If value is not numeric, do Exception Report.
- 2) If number > 99, do Exception Report.

Exception Report:

Exception Report Name: "Field Name"

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC Value" updated with the value to be used by the vendor during the Post-Verification process.

Wave Height Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If value is not numeric, do Exception Report.
- 2) If number is less than 0 or exceeds 99, do Exception Report.

Exception Report:

Exception Report Name: "Field Name".

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Value.

Exit Processing.

The Exception Report will be returned to the vendor with the "TC Value" updated with the values to be used by the vendor during the Post-Verification process.

Percent Exchanged Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If value is not numeric, do Exception Report.
- 2) If number exceeds 999, do Exception Report.
- 3) If number is ≤ 0 , do Exception Report.

Exception Report:

Exception Report Name: "Field Name".

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC Value" updated with the values to be used by the vendor during the Post-Verification process.

Salinity Transform Process (Data Value, Field Name, Salinity Unit)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) Scan value and convert all commas <,> to periods <.>
- 2) If value is not numeric, do Exception Report.
- 3) If value exceeds 60, do Exception Report.
- 4) If Salinity Unit = <S>
 - a. If Salinity value is not between 0.995 and 1.040, do Exception Report.
- 5) If Salinity Unit = <P>
 - a. If Salinity value is not whole number, do Exception Report.

Exception Report:

Exception Report Name: "Field Name".

Columns:

BWRF Filename, "Field Name", Salinity Unit, Form Field Value, TC Salinity Unit Value, TC Salinity Value

Exit processing.

The Exception Report will be returned to the vendor with the TC Salinity Unit Value, TC Salinity Value updated with the values to be used by the vendor during the Post-Verification process.

Volume Transform Process (Data Value, Field Name)

The Objective is to transform the "Data Value" into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If one of the last three characters is a comma, change it to a period.
- 2) If value is not numeric, do Exception Report.
- 3) If number $> 999,999.999$, do Exception Report.
- 4) If number is ≤ 0 , include in Exception Report.

Exception Report:

Exception Report Name: "Field Name"

Columns:

BWRF Filename, "Field Name", Form Field Value, TC Value.

Exit processing.

The Exception Report will be returned to the vendor with the "TC Value" updated with the values to be used by the vendor during the Post-Verification process.

Yes or No Transform Process (Yes Value, No Value, Field Name)

The Objective is to transform the <Yes Value> and <No Value> into an acceptable value for the Load process.

Processing Logic as follows:

- 1) If "Yes Value" and "No Value" are both 1, do Exception Report.
- 2) If "Yes Value" and "No Value" are both 0, do Exception Report.

Exception Report:

Exception Report Name: "Field Name"

Columns:

BWRF Filename, "Field Name", "Yes Value", "No Value", TC Yes Value, TC No Value.

Exit processing.

The Exception Report will be returned to the vendor with the TC Yes Value and TC No Value columns updated with the values to be used by the vendor during the Post-Verification process.

DMS to DEC Conversion

The following is the actual code from the BWIS for the conversion from DECIMAL to DMS (Degrees, Minutes, Seconds) and DMS to DECIMAL for the Latitude and Longitude: This is only required for direct importation into the database.

The conversion function (DMS to DEC) is as follows:

```
Public Function ConvertDMStoDecimal(ByVal strDegrees As String, _
                                   ByVal strMinutes As String, _
                                   ByVal strSeconds As String, _
                                   ByVal strCompass As String) As Single

    Dim intDegrees As Integer
    Dim intMinutes As Integer
    Dim intSeconds As Integer
    Dim sngResult As Single

    ConvertDMStoDecimal = 0

    intDegrees = CInt(strDegrees)
    intMinutes = CInt(strMinutes)
    intSeconds = CInt(strSeconds)
    sngResult = intDegrees + (intMinutes / 60) + (intSeconds / 3600)
    If (strCompass = "S") Or (strCompass = "W") Then
        sngResult = sngResult * -1
    End If

    ConvertDMStoDecimal = sngResult
End Function
```

Post Validations Required (Tranform Step 2C)

Post Verifications can only be performed once all the data items are available for each report. The Objective is to ensure the record meets the business validation of the application.

Voyage Information

1. Add to exception report if there is an existing reporting form with the same IMO Number with the same arrival date. Exception Report(<IMO Number>, IMO Number)

Ballast Water Usage and Capacity

2. If "No. of Tanks in Ballast" > "Total No. of Tanks on Ship" then add to Exemption Report("No. of Tanks in Ballast", No. of Tanks in Ballast).
3. If Total Ballast Water On Board > Total Ballast Water Capacity Volume then add to Exception Report("Total Ballast Water On Board", Total Ballast Water On Board).

Ballast Water Management

4. If "Total No. Ballast Water Tanks to be Discharged" > "Ballast Water Usage and Capacity.Total No. of Tanks on Ship" then add to Exception Report ("Total No. Ballast Water Tanks to be Discharged", Total No. Ballast Water Tanks to be Discharged).
5. If "Total No. Tanks That Underwent Exchange" > "Total No. Ballast Water Tanks to be Discharged" then add to Exception Report("Total No. Tanks That Underwent Exchange", Total No. Tanks That Underwent Exchange).

Ballast Water History

6. If "BW Source.Date" > "Voyage Information.Arrival Date" then add to Exception Report("BW Source.Date", BW Source.Date).
7. If "BW Source.Port" not specified when "BW Source.Latitude" and "BW Source.Longitude" are blank then add to Exception Report("BW Source.Port", BW Source.Port).
8. All "BW Management Practices.fields except Salinity and Wave Height are mandatory if any "Management Practices.field" is specified. For blank required fields add to Exception Report(BW Management Practices.Field Name, BW Management Practices.Field Value).
9. If "BW Management Practices.Date" < "BW Sources.Date" then add to Exception Report("BW Management Practices.Date", BW Management Practices.Date).
10. All "Proposed BW Discharge.fields except Salinity are mandatory if any "Proposed BW Discharge.field" is specified. For blank required fields add to Exception Report(Proposed BW Discharge.Field Name, Proposed BW Discharge.Field Value).
11. If "Proposed BW Discharge.Date" < "BW Sources.Date" then add to Exception Report("Proposed BW Discharge.Date(1)", Proposed BW Discharge.Date).
12. If "Proposed BW Discharge.Date" < "Voyage Information.Arrival Date" then add to Exception Report("Proposed BW Discharge.Date(2)", Proposed BW Discharge.Date).
13. If "Proposed BW Discharge.Date" < "BW Management Practices.Date" then add to Exception Report("Proposed BW Discharge.Date(3)", Proposed BW Discharge.Date).
14. If the sum of ("Proposed BW Discharge.Volume") > "Total Ballast Water On Board.Volume" then add to Exception Report("Proposed BW Discharge.Volume", Proposed BW Discharge.Volume).

Exception Report: ("Field Name","Form Field Value")

Exception Report Name: "Post Validations".

Columns: BWRF Filename, "Field Name", Form Field Value, TC Value.

Exit Processing.

The Exception Report will be returned to the vendor with the “TC Value” updated with the correction actions or the values to be used by the vendor for the Data Load process.

BW Application Database for data extraction, transformation and loading

The following is provided to the vendor as a requirement for output fields. The data is to be extracted into the 2 file structures below: CM001 and CM002. These output fields must be used during the data extraction, transformation and loading.

CM002_BALLAST_WATER_TANK	CM001_BALLAST_WATER_RPRTNG_FRM
REPORTING_FORM_ID: NUMBER(12) NOT NULL (FK) TANK_REPORT_SEQ_NUM: NUMBER(2) NOT NULL	REPORTING_FORM_ID: NUMBER(12) NOT NULL
TANK_TYPE_CD: VARCHAR2(2) NULL (FK) TANK_LOCATION_CD: VARCHAR2(2) NULL (FK) SOURCE_DTE: DATE NOT NULL SOURCE_PORT_CD: VARCHAR2(8) NULL (FK) SOURCE_LATITUDE_NUM: NUMBER(12,5) NULL SOURCE_LONGITUDE_NUM: NUMBER(12,5) NULL SOURCE_VOLUME_NBR: NUMBER(8,2) NOT NULL EXCHANGE_DTE: DATE NULL EXCHANGE_START_LATITUDE_NUM: NUMBER(12,5) NULL EXCHANGE_START_LONGITUDE_NUM: NUMBER(12,5) NULL EXCHANGE_END_LATITUDE_NUM: NUMBER(12,5) NULL EXCHANGE_END_LONGITUDE_NUM: NUMBER(12,5) NULL EXCHANGE_VOLUME_NBR: NUMBER(8,2) NULL EXCHANGE_PERCENT_NBR: NUMBER(3) NULL EXCHANGE_METHOD_CD: VARCHAR2(3) NULL (FK) EXCHANGE_WAVE_HEIGHT_NBR: NUMBER(4,2) NULL EXCHANGE_WAVE_HEIGHT_UNIT_CD: VARCHAR2(1) NULL (FK) DISCHARGE_DTE: DATE NULL DISCHARGE_PORT_CD: VARCHAR2(8) NULL (FK) DISCHARGE_LATITUDE_NUM: NUMBER(12,5) NULL DISCHARGE_LONGITUDE_NUM: NUMBER(12,5) NULL DISCHARGE_VOLUME_NBR: NUMBER(8,2) NULL DISCHARGE_SALINITY_NBR: NUMBER(9,3) NULL DISCHARGE_SALINITY_UNIT_CD: VARCHAR2(1) NULL (FK) DATE_LAST_UPDATE_DTE: DATE NULL USER_LAST_UPDATE_ID: NUMBER(12) NULL (FK) TANK_NUM: NUMBER(2) NULL SOURCE_SALINITY_NBR: NUMERIC(9,3) NULL SOURCE_SALINITY_UNIT_CD: VARCHAR2(1) NULL (FK) TANK_INFO_TXT: VARCHAR2(100) NULL EXCHANGE_SALINITY_NBR: NUMBER(9,3) NULL EXCHANGE_SALINITY_UNIT_CD: VARCHAR2(1) NULL (FK)	VESSEL_ID: NUMBER(12) NOT NULL (FK) FORM_ENTERED_DTE: DATE NOT NULL IMO_NO: VARCHAR2(7) NOT NULL FORM_STATUS_CD: VARCHAR2(1) NOT NULL (FK) BALLAST_WATER_RISK_FACTOR_NBR: NUMBER(9,4) NOT NULL ARRIVAL_PORT_CD: VARCHAR2(8) NOT NULL (FK) ARRIVAL_DTE: DATE NOT NULL AGENT_CD: VARCHAR2(4) NULL (FK) LAST_PORT_CD: VARCHAR2(8) NOT NULL (FK) NEXT_PORT_CD: VARCHAR2(8) NOT NULL (FK) NEXT_PORT2_CD: VARCHAR2(8) NULL (FK) NEXT_PORT3_CD: VARCHAR2(8) NULL (FK) WATER_BALLAST_VOLUME_NBR: NUMBER(9,3) NOT NULL WATER_BALLAST_VOLUME_UNIT_CD: VARCHAR2(2) NULL (FK) WATER_BALLAST_TANKS_NBR: NUMBER(2) NOT NULL WATER_CAPACITY_VOLUME_NBR: NUMBER(9,3) NOT NULL WATER_CAPACITY_VOLUME_UNIT_CD: VARCHAR2(2) NULL (FK) WATER_CAPACITY_TANKS_NBR: NUMBER(2) NOT NULL WATER_TANKS_DISCHARGED_NBR: NUMBER(2) NOT NULL WATER_TANKS_EXCHANGED_NBR: NUMBER(2) NOT NULL WATER_TANKS_ALTERNATIVE_NBR: NUMBER(2) NOT NULL ALTERNATE_EXCHANGE_METHOD_CD: VARCHAR2(2) NULL (FK) ALTERNATE_EXCHANGE_REASON_CD: VARCHAR2(2) NULL (FK) MANAGEMENT_PLAN_ONBOARD_IND: VARCHAR2(1) NULL MANAGEMENT_PLAN_IMPLEMENT_IND: VARCHAR2(1) NULL IMO_GUIDELINE_ONBOARD_IND: VARCHAR2(1) NULL ADDITION_DISCHARGE_IND: VARCHAR2(1) NULL BEST_MANAGEMENT_PRACTICE_IND: VARCHAR2(1) NULL WATER_TANKS_VOLUME_UNIT_CD: VARCHAR2(2) NULL (FK) SALINITY_EQUIVALENCE_IND: VARCHAR2(1) NULL OFFICER_NM: VARCHAR2(150) NULL OFFICER_TITLE_CD: VARCHAR2(2) NULL (FK) GENERAL_COMMENTS_TXT: VARCHAR2(800) NULL DATE_LAST_UPDATE_DTE: DATE NULL USER_LAST_UPDATE_ID: NUMBER(12) NULL (FK) FORM_SUBMITTED_DTE: DATE NOT NULL

CM001_BALLAST_WATER_RPRTNG_FRM

CM001.Column	Notes
REPORTING_FORM_ID	Use sequence 15062100000 to 150621999999
FORM_ENTERED_DTE	Current Date (SYSDate)
IMO_NO	See Form Element: IMO Number
FORM_SUBMITTED_DTE	See Form Element: Date of submission
FORM_STATUS_CD	0
ARRIVAL_DTE	See Form Element: Arrival Date
BALLAST_WATER_RISK_FACTOR_NBR	0
WATER_BALLAST_VOLUME_NBR	See Form Element: Volume inTotal Ballast Water on Board

CM001.Column	Notes
WATER_BALLAST_TANKS_NBR	See Form Element: No. of tanks in ballast in 3-Ballast Water Usage and Cap
WATER_CAPACITY_VOLUME_NBR	See Form Element: Volume in Total Ballast Water Capacity
WATER_CAPACITY_TANKS_NBR	See Form Element: Total No. of tanks on vessel in Total Ballast Water Capacity
WATER_TANKS_DISCHARGED_NBR	See Form Element: "Total No. Ballast Water Tanks to be discharged" in Ballast Water Management
WATER_TANKS_EXCHANGED_NBR	See Form Element: "How many tanks have undergone exchange?" in Ballast Water Management
WATER_TANKS_ALTERNATIVE_NBR	See Form Element: "How many tanks have undergone alternate management?" in Ballast Water Management
MANAGEMENT_PLAN_ONBOARD_IND	See Form Element: "Ballast water management plan on board?" in Ballast Water Management
MANAGEMENT_PLAN_IMPLEMENT_IND	See Form Element: "Management plan implemented?" in Ballast Water Management
IMO_GUIDELINE_ONBOARD_IND	See Form Element: "IMO ballast water guidelines on board [Resolution A.868 (20)]?" in Ballast Water Management
ADDITION_DISCHARGE_IND	Null
BEST_MANAGEMENT_PRACTICE_IND	Null
SALINITY_EQUIVALENCE_IND	Null
OFFICER_NM	See Form Element: "Responsible Officer's Name And Title"
DATE_LAST_UPDATE_DTE	Current Date
VESSEL_ID	See Form Element: IMO Number
ARRIVAL_PORT_CD	See Form Element: Arrival Port
LAST_PORT_CD	See Form Element: Last Port
NEXT_PORT_CD	See Form Element: Next Port
NEXT_PORT2_CD	See Form Element: Next Port (2)
NEXT_PORT3_CD	See Form Element: Next Port (3)
WATER_BALLAST_VOLUME_UNIT_CD	See Form Element: Units inTotal Ballast Water on Board
WATER_CAPACITY_VOLUME_UNIT_CD	See Form Element: Units inTotal Ballast Water Capacity
ALTERNATE_EXCHANGE_METHOD_CD	See Form Element: "Please specify alternative method(s) used, if any" in Ballast Water Management
ALTERNATE_EXCHANGE_REASON_CD	See Form Element: "If no ballast water management conducted, state reason why not" in Ballast Water Management
OFFICER_TITLE_CD	Null
USER_LAST_UPDATE_ID	603168
AGENT_CD	See Form Element: "Agent" in Voyage Information
GENERAL_COMMENTS_TXT	<Backlog > "BWRP Filename"
WATER_TANKS_VOLUME_UNIT_CD	01

CM002_BALLAST_WATER_TANK

CM002.Column	Notes
REPORTING_FORM_ID	Parent CM001.REPORTING_FORM_ID
TANK_REPORT_SEQ_NUM	Sequential number within REPORTING_FORM_ID starting at 1 and incremented by one for each tank on the reporting form

TANK_NUM	Null
TANK_TYPE_CD	Null
TANK_LOCATION_CD	Null
SOURCE_DTE	See Form Element: "Date dd/mm/yyyy" in Bw Sources
SOURCE_LATITUDE_NUM	See Form Element: "Port or Lat. & Long." in Bw Sources
SOURCE_LONGITUDE_NUM	See Form Element: "Port or Lat. & Long." in Bw Sources
SOURCE_VOLUME_NBR	See Form Element: "Current Volume (m3)" in Bw Sources
SOURCE_PORT_CD	See Form Element: "Port or Lat. & Long." in Bw Sources
SOURCE_SALINITY_NBR	Null
SOURCE_SALINITY_UNIT_CD	Null
EXCHANGE_DTE	See Form Element: "Date dd/mm/yyyy" in BW MANAGEMENT PRACTICES
EXCHANGE_START_LATITUDE_NUM	See Form Element: "Start Point Lat. & Long." in BW MANAGEMENT PRACTICES
EXCHANGE_START_LONGITUDE_NUM	See Form Element: "Start Point Lat. & Long." in BW MANAGEMENT PRACTICES
EXCHANGE_END_LATITUDE_NUM	See Form Element: "End Point Lat. & Long." in BW MANAGEMENT PRACTICES
EXCHANGE_END_LONGITUDE_NUM	See Form Element: "End Point Lat. & Long." in BW MANAGEMENT PRACTICES
EXCHANGE_VOLUME_NBR	See Form Element: "Used volume (m3)" in BW MANAGEMENT PRACTICES
EXCHANGE_PERCENT_NBR	See Form Element: "% Exch" in BW MANAGEMENT PRACTICES
EXCHANGE_WAVE_HEIGHT_UNIT_CD	<M>
EXCHANGE_WAVE_HEIGHT_NBR	See Form Element: "Wave HT.(m)" in BW MANAGEMENT PRACTICES
EXCHANGE_METHOD_CD	See Form Element: "Method (ER/FT/ALT)" in BW MANAGEMENT PRACTICES
EXCHANGE_SALINITY_NBR	See Form Element: "Salinity" in BW MANAGEMENT PRACTICES
EXCHANGE_SALINITY_UNIT_CD	See Form Element: "Salinity" in BW MANAGEMENT PRACTICES
DISCHARGE_DTE	See Form Element: "Date dd/mm/yyyy" in PROPOSED BW DISCHARGE
DISCHARGE_LATITUDE_NUM	See Form Element: "Port or Lat. & Long" in PROPOSED BW DISCHARGE
DISCHARGE_LONGITUDE_NUM	See Form Element: "Port or Lat. & Long" in PROPOSED BW DISCHARGE
DISCHARGE_PORT_CD	See Form Element: "Port or Lat. & Long" in PROPOSED BW DISCHARGE
DISCHARGE_VOLUME_NBR	See Form Element: "Volume (m3)" in PROPOSED BW DISCHARGE
DISCHARGE_SALINITY_NBR	See Form Element: "Salinity" in PROPOSED BW DISCHARGE
DISCHARGE_SALINITY_UNIT_CD	See Form Element: "Salinity" in PROPOSED BW DISCHARGE
DATE_LAST_UPDATE_DTE	Current Date (SysDate)
USER_LAST_UPDATE_ID	603168
TANK_INFO_TXT	See Form Element: "Tanks/Holds List multiple sources/tanks separately" in Section 5