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APRIL 30, 1999

WESTERN EDITION OF NOTICES TO MARINERS

Published monthly by the

CANADIAN COAST GUARD

NOTICES

701 to **767**

CONTENTS

Marine Navigation Services
Directorate
Marine Aids

RECYCLED PAPER

Internet:

http://www.notmar.com

ADVISORY

NOTICES TO SHIPPING (WRITTEN AND BROADCAST)

The Canadian Coast Guard is implementing a number of changes to the aids to navigation system in Canada.

These changes are advertised as Notices to Shipping (Broadcast and Written) by the Canadian Coast Guard and are followed up with Notices to Mariners, then charts are updated by hand correction, reprints or new editions.

The publication of Notices to Mariners and chart revisions are being delayed by the volume of changes that are taking place.

Mariners are advised that all relevant Written Notices to Shipping should be kept until superseded by Notices to Mariners or through revised charts issued by the Canadian Hydrographic Service.

Written Notices to Shipping are published weekly and are available from local Canadian Coast Guard Offices.

The Canadian Hydrographic Service is reviewing the impact of these changes with the Canadian Coast Guard and together we are preparing an action plan on the issuing of chart revisions.

For further information contact your local Canadian Coast Guard office.

Newfoundland

St. John's MCTS Centre
Phone: (709) 772-2083
Fax: (709) 772-6285

Maritimes

Maritimes Regional Operations Centre
Toll Free in Maritimes 1-800-565-1633
Phone: (902) 426-6030
Fax: (902) 426-6334
http://www.mar.dfo.mpo.gc.ca/cg/ops/roc.htm
Website E-Mail: ROCWeb@mar.dfo-mpo.gc.ca

Laurentienne

GC\SO\COR
Notices to Shipping
Phone: (418) 648-5410
Fax: (418) 648-7244
E-Mail: OPSAVIS@dfo-mpo.gc.ca

Central & Arctic

Sarnia MCTS Centre
Toll Free in Ontario 1-800-265-0237
Phone: (519) 337-6360
Fax: (519) 337-2498

Pacific

Vancouver Regional Marine Information Centre
Phone: (604) 666-6011
Fax: (604) 666-8453

EXPLANATORY NOTES

Geographical positions refer directly to the graduations of the largest scale Canadian Hydrographic chart unless otherwise indicated.

Bearings refer to the true compass and are measured clockwise from 000° (North) clockwise to 359°; those relating to lights are from seaward.

Visibility of lights is that in clear weather.

Depths - The units used for soundings (metres, fathoms or feet) are stated in the title of each chart.

Elevations are normally given above Higher High Water, Large Tides unless otherwise indicated.

Original Canadian Information - A star (*) adjacent to the Notice number indicates that this notice is based on original Canadian information.

Distances may be calculated as follows:

1 nautical mile = 1 852 metres (6,076.1 feet)
1 statute mile = 1 609.3 metres (5,280 feet)
1 metre = 3.28 feet

Temporary & Preliminary Notices are indicated by a (T) or a (P) after the Notice number. Nautical charts and publications are not hand amended for Temporary (T) and Preliminary (P) Notices to Mariners. Listings of Charts Affected by Temporary and Preliminary Notices to Mariners are revised and promulgated quarterly, in Section I. Reference should be made to the latest published listing and to the monthly editions of Notices to Mariners published subsequently.

Please note that, in addition to the temporary and preliminary changes normally advertised as (T) and (P) Notices, there are a significant number of permanent changes to navigational aids that have been advertised as Preliminary Notices to Mariners while charts are being updated for new editions.

Marine Information Report & Suggestion Sheet - Mariners are requested to notify the responsible authorities when new or suspected dangers to navigation are discovered, changes observed in aids to navigation or corrections to publications are seen to be necessary. Such communications can be made using the *Marine Information Report & Suggestion Sheet* inserted on the last page of each monthly edition of *Notices to Mariners.*

Monthly edition of Notices to Mariners - *Notices to Mariners* are issued free of charge on a monthly basis. Mariners now have a choice between specific *Regional* issue(s) they wish to receive. Requests to be placed on or removed from the mailing list should be made by using the form inserted on page *x* of each monthly edition. Notification of changes to the mailing addresses, regional issues and/or number of copies required should also be transmitted by means of this form.

Canadian Nautical Charts & Publications - A source list of *Canadian Nautical Charts & publications* is published in *Notice No. 14* of the current *Annual Edition of Notices to Mariners.* The source supply and the prices effective at the time of printing are listed. This list is periodically updated in the monthly edition of *Notices to Mariners.*

NOTE: Cette publication est aussi disponible en français.

DGPS INITAL OPERATIONAL SERVICE

The Canadian Coast Guard (CCG) announces that the Differential Global Positioning Service (DGPS) Initial Operational Service (IOS) is available for positioning and navigation.

IOS means the service will provide a DGPS broadcast using the type 9 RTCM message for pseudorange corrections at a data transmission rate of 200 baud. Refer to Radio Aids to Marine Navigation (RAMN) for estimated advertised coverage for each differential station.

Although the service is IOS, users may experience service interruptions without advance notice. Further, CCG advises that IOS DGPS broadcasts should not be used under any circumstances where a sudden system failure or inaccuracy could constitute a safety hazard. Following a one year verification period, the DGPS service will be declared as being a Full Operational Service (FOS).

Users are also advised that differential corrections are based on the NAD 83 datum position of the reference station antenna and positions obtained using DGPS should be referenced to this coordinate system only. DGPS receivers must be set to the WGS 84 datum in order to obtain optimum positioning accuracy.

Table of Stage 1 DGPS Reference Stations

Station Name	Id Nos of Ref. Stations	DGPS Station ID	Georgr. Pos. Latitude Longitude	Frequency [khz]	Bits/sec.
Alert Bay BC	300,301	909	50 35 N 126 55 W	309	200
Amphitrite Pt BC	302,303	908	48 55 N 125 33 W	315	200
Richmond BC	304,305	907	49 11 N 123 07 W	320	200
Sandspit BC	306,307	906	53 14 N 131 49 W	300	200
Cardinal ON	308,309	919	44 47 N 75 25 W	306	200
Wiarton ON	310,311	918	44 45 N 81 07 W	286	200
St. Jean Richelieu QUÉ	312,313	929	45 19 N 73 19 W	296	200
Lauzon QUÉ	316,317	927	46 49 N 71 10 W	309	200
Rivière-du-Loup QUÉ	318,319	926	47 46 N 69 36 W	300	200
Moisie QUÉ	320,321	925	50 12 N 66 07 W	313	200

Table of Stage 1 DGPS Reference Stations					
Station Name	**Id Nos of Ref. Stations**	**DGPS Station ID**	**Georgr. Pos. Latitude Longitude**	**Frequency [khz]**	**Bits/sec.**
Partridge Island NB	326,327	939	45 14 N 66 03 W	295	200
Pt. Escuminac NB	332,333	936	47 04 N 64 48 W	319	200
Western Head NS	334,335	935	43 59 N 64 39 W	312	200
Fox Island NS	336,337	934	45 20 N 61 05 W	307	200
Cape Race NFLD	338,339	940	46 46 N 53 11 W	315	200
Cape Ray NFLD	340,341	942	47 38 N 59 14 W	290	200
Cape Norman NFLD	342,343	944	51 30 N 55 49 W	310	200

DGPS USER ALERT

Currently, seventeen DGPS stations are providing Initial Operational Service (IOS) in Canada. The DGPS station at Rigolet, Labrador will be installed in November 30/98. Extensive validation of operational performance is being conducted throughout 1998. Full Operational Service (FOS) will follow after successful validation. Mariners are reminded to use caution when using DGPS until the Service is declared fully operational.

The Canadian Coast Guard has recently received reports of DGPS receivers apparently ignoring the broadcast alarm which should signal the immediate discontinuation of a particular satellite correction. Reports indicate that some user equipment does not properly recognize this “do-not-use” correction flag and as a result erroneously processes it as a correction. This can result in position errors as large as 15 kilometers while the receiver is in DGPS mode. DGPS users are advised that they should contact the manufacturer of their equipment immediately to determine if they require a receiver upgrade.

Apart from this, no major difficulties with DGPS implementation have been experienced to date nor are any expected in the future.

DISCREPANCY REPORT FOR DGPS USERS.

The Canadian Coast Guard is currently implementing the Differential Global Positioning System in Canada. Currently, seventeen DGPS stations are providing Initial Operational Service (IOS) in Canada. The DGPS station at Rigolet, Labrador will be installed in November 30/98.

Following a service validation period, it is expected that the DGPS service will be announced as providing a Full Operational Service (FOS) in March 1999. The fully operational DGPS service is expected to meet the advertised Levels of Service standards and all service guarantees will be provided with FOS.

Throughout the service validation period, the Coast Guard will be conducting numerous tests of the differential service. To assist the Coast Guard in this validation testing, mariners are requested to complete the attached anomoly report. Please take note of any DGPS service anomalies you experience and forward the completed form to the Director Marine Aids, Fisheries and Oceans Canada, 200 Kent Street, Station 5130, Ottawa, ON, K1A 0E6.

GPS “ROLLOVER” AUGUST 1999

The Global Positioning System accounts for time by using a number for every week the service is in operation and accounts for the seconds within each numeric week. It counts weeks using a starting point of midnight (0000) on the evening of January 5, 1980 / morning of January 6, 1980 (UTC), and has increased its count by 1 for each week since then. Both week and seconds are broadcast as part of the GPS message provided by the satellites and are used by receivers in their computations. The GPS week number field in this message can only provide for numbers up to 1024 which means that, at the completion of the week 1023, the week number field will roll over from 1023 back to 0. This will occur at midnight 21-22 August 1999. On 22 August 1999, unless repaired, many GPS receivers will claim that it is 6 January 1980.

It will be the responsibility of the user to account for this changeover, the satellite themselves will simply start broadcasting the new week number. How it will affect your particular GPS unit will depend on what brand and model of receiver you have. Some receivers may merely display inaccurate date information, but others may also calculate incorrect navigation information or might stop providing positions. If the rollover hasn’t been taken into account at the time your GPS receiver was designed and built, then the unit might have problems. Some units will require a software upgraded. Mariners are advised to consult with the manufacturers of their receiver’s compliance to GPS rollover.

DGPS station anomaly report / Rapport d'anomalie des stations DGPS

With the purpose of constantly evaluating the quality of the DGPS service offered, the Canadian Coast Guard is providing the mariner with the following anomaly report. This report will allow us to get well-supported information concerning the anomaly and thus, will facilitate the identification of the origin of the problem. Please fill accordingly each section of this report and forward it by the suggested ways. You will find a legend at the end of this document.

Avec le souci d'évaluer constamment la qualité du service DGPS offert, la Garde côtière met à la disposition du navigateur le présent rapport d'anomalie. Ce rapport servira à bien documenter l'anomalie et, de ce fait, facilitera l'identification ou la recherche de la source du problème. Nous vous prions de bien remplir chaque section de ce rapport et de l'acheminer de la façon suggérée. Vous trouverez une légende à la fin de ce document.

User informations / Renseignements sur l'usager

Vessel name / Nom du navire:_____ Destination:_____
Vessel position at the beginning of the anomaly /
Position du navire au début de l'anomalie :_____
Vessel position at the end of the anomaly /
Position du navire à la fin de l'anomalie :_____

Anomaly report / Rapport d'anomalie

Date and time of the anomaly / Date et heure de l'anomalie:_____ Duration / Durée:___
Number of satellites tracked on GPS receiver / Nombre de satellites reçu par le récepteur:_____
DGPS site using / Station DGPS utilisée: Freq.: _____kHz SS:_____dB SNR:___d
DOP Geometry / Géométrie DOP :_____
User receiver operates correctly with other DGPS sites? /
Votre équipement DGPS fonctionne-t-il normalement à l'utilisation d'autres stations DGPS?: Yes/ Oui _____No / Non_____
Comments / Commentaires: _____
_____
_____

Point of contact / Personne-ressource: Name/ Nom:_____
Phone / Téléphone :_____

Weather conditions / Conditions météo

Winds / Vents : Direction:____Speed / Vitessse:____KTS
Temp. ^{o}C: _____VIS:_____N.M.
Sea State / État de la mer :_____
Bearing and range to electrical storm /
Direction et distance de l'orage :_____
Time of the storm / Heure de l'orage:_____l

Essential informations on user equipment to fill / Renseignements indispensables sur l'équipement à remplir:

User equipment informations / Renseignements sur l'équipement

GPS receiver / Récepteur GPS: Make / Fabriquant:_____Model:___
DGPS beacon receiver / Démodulateur DGPS: Make / Fabriquant :Model:_____
Gyro interface with GPS / Gyro intégré avec le GPS? Yes / Oui :_____No / Non :___

DGPS interfaced with an ECDIS / DGPS intégré dans un SVCEI? Yes / Oui:_____No / Non :___
If yes, please fill below / Si oui, S.V.P. compléter ci-dessous:
ECDIS / SVCEI: Make / Fabriquant:_____Model:___
Radar image interfaced / Image radar intégrée?: Yes / Oui:_____No / Non:___
Gyro interfaced with ECDIS / Gyro intégré avec SVCEI? Yes / Oui:_____No / Non:___
Permanent installation or in evaluation / Installation permanente ou en évaluation :_____

This report can be sent the following ways / Ce rapport peut être acheminé selon les façons suivantes:

1) Fax / Par télécopieur : 613-998-8428 attention AWAD.

2) Mail / Par la poste: Director Marine Aids
Fisheries and Oceans Canada
200 Kent Street, Station 5130
Ottawa, ON
K1A 0E6.

Canada

Legend / Légende

Position : Position can be provided by latitude, longitude, bearing and distance, location of a buoy, etc.
La position peut être donnée en latitude, longitude, relèvement et distance, emplacement de bouée, etc.

KTS : Wind speed in knots / Vitesse du vent en noeuds.

N.M. : Visibility in Nautical Miles / Visibilité en milles nautiques.

Freq. kHz : Frequency in kilohertz / Fréquence en kilohertz .

SS : Signal strength in decibel / Force de signal en décibel.

SNR : Signal to noise ratio in decibel / Rapport signal-bruit en décibel .

DOP (dilution of precision) : Measure of the geometrical « strength » of the GPS satellite configuration. The DOP is measured on a scale of 1 to 10 / Mesure de la « force » géométrique de la configuration satellite. Le DOP est mesuré sur une échelle de 1 à 10

SVCEI / ECDIS : Electronic Chart Display and Information System / Système de Visualisation de Cartes Electroniques et d'Information .

IMPORTANT NOTICE TO USERS

The Canadian Coast Guard Marine Aids Modernization Program

- The Canadian Coast Guard is initiating an aids to navigation modernization program which takes advantage of modern technology and will result in a more equitable, safe, cost-effective and environmentally friendly service across Canada. Low maintenance buoys, solar power, the elimination of diesel power and the application of national provision and design standards, will be used to realize these objectives.

- In consultation with local users, aids to navigation which are redundant, exceed the national standards or should not be publicly funded, will be downsized, privatized or discontinued.

- Regional plans as well as detailed Notices to Shipping and Notices to Mariners will be issued and distributed in the usual manner in advance of all changes to aids to navigation. All users are encouraged to participate in local consultations and to monitor these Notices. It will be every user's responsibility to adapt to the changes and to take the appropriate measures.

1. Redundant Aids to Navigation

Many conventional aids to navigation were established for commercial mariners who now use radar. As a result these users no longer require as many landfall shore lights, large lighted buoys and fog signals and support their discontinuance.

However, before these commercially redundant marine aids are removed, the Coast Guard is assessing, where required, the local needs of small craft operators and redesigning the old commercial aids to meet these needs within national provision policies and design standards.

Coast Guard policy does not provide for the retention of fog horns for pleasure craft, due to the high cost to provide such a service across Canada. However, where practical and where there is local support, the existing redundant fog horns are being transferred to local authorities at no cost.

The conversion of lightstations to solar power allows major economic and environmental benefits by allowing removal of fuel tanks and diesel generators. Although this eliminates the need for many structures, the Coast Guard will protect all heritage lightstations through continued operation or transfer to provincial, municipal or other authorities for local use.

2. Aids to Navigation Standards

In consultation with local users, all aids to navigation systems across Canada are under review. National system design standards will be used to assess these systems. Systems that do not meet these standards will be upgraded; those systems that exceed them will be downsized.

Adjustments in some channels will result in an increase or a decrease in the number of buoys and/or the conversion of some lighted buoys to unlighted buoys displaying reflective material.

3. Private Aids to Navigation

Although Coast Guard policy does not provide for the establishment of aids to navigation in inadequately charted waters, or where the traffic volume does not justify the cost of the system, some have been established in the past. These aids to navigation will be transferred to local authorities at no cost, with Coast Guard retaining design and regulatory authority under the *Private Buoy Regulations*.

NEW INITIATIVES

The Canadian Coast Guard is also introducing a new differential correction service to augment the satellite-based Global Positioning System (GPS), with 18 transmitting stations fully operational in 1998.

This Differential Global Positioning System (DGPS), will improve the accuracy and integrity of GPS and will enable mariners who are equipped with the appropriate receivers to identify their precise position in most major southern Canadian waters, including the Great Lakes and the St. Lawrence River.

The use of DGPS in conjunction with Electronic Chart Display and Information Systems (ECDIS), will greatly improve navigation accuracy. The expanding use of this new technology is expected to increase marine safety and thus provide greater environmental protection to Canadian waters. It is also believed that implementation of DGPS will allow further adjustment to conventional aids in the future.

All mariners and shipowners are encouraged to equip their vessels with GPS receivers which have the capability to receive the Differential signals, particularly where there is frequent risk of reduced visibility.

The Canadian Coast Guard believes that the availability of GPS, particularly when augmented by the Differential service, will make Loran C obsolete. Consultations are underway to assess the impact of discontinuing Loran C in Canada.

CENTRAL & ARCTIC REGION

Aids Modernization consultations are continuing throughout the Central and Arctic Region of the Canadian Coast Guard. Mariners are urged to continue to read and monitor Notices to Shipping and Notices to Mariners for the most recent concerning adjustments to aids to navigation. You may also access the Central and Arctic Website at www.ccg-gcc.gc.ca/cen-arc/main.htm for further information.

Mariners and representatives of user groups seeking clarification, having questions, or wishing to provide comments or recommendations concerning any aids to navigation notice may to contact:

Superintendent Marine Aids Program
Central and Arctic Region
201 Front Street North, Suite 703
Sarnia, Ontario, N7T 8B1
Telephone (519) 383-1859 or (519) 383-1861
Facsimile (519) 383-1989

MONTHLY EDITION OF NOTICES TO MARINERS

MAILING LIST CHANGES

Director General,
Marine Navigation Services Directorate,
Canadian Coast Guard,
Department of Fisheries and Oceans,
Ottawa, Ontario,
K1A 0E6

Telephone - (613) 990-3037
Facsimile - (613) 998-8428

Please indicate which edition you would like to receive.

EASTERN EDITION (will be comprised of Arctic, Newfoundland, Maritimes, Gulf & River St. Lawrence and Central areas) _____

WESTERN EDITION (will be comprised of Arctic and Pacific areas) _____

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	753	5						
LC 3512	728	6						
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3601	733	5						
3670 R/M	705	5						
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3787	743	7						
3934	730	7						
3960	718	7						

***766 CANADIAN HYDROGRAPHIC SERVICE - Charts.**

CHART	TITLE & CONTENTS	SCALE	DATED	CAT #	PRICE
1. New Editions.					
	BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE				
3440	RACE ROCKS TO/À D'ARCY ISLAND	1:40 000	Dec. 25/98	2	$20.00
3493	VANCOUVER HARBOUR - WESTERN PORTION/PARTIE OUEST	1:10 000	Dec. 18/98	2	20.00
3494	VANCOUVER HARBOUR - CENTRAL PORTION/PARTIE CENTRALE	1:10 000	Dec. 18/98	2	20.00
3495	VANCOUVER HARBOUR - EASTERN PORTION/PARTIE EST	1:37 500	Nov. 20/98	2	20.00

(AMA8035-10-35) (DFO-H99-070)

*** 754 SUMMARY OF TEMPORARY AND PRELIMINARY NOTICES IN EFFECT MARCH 26, 1999**

(Revised and promulgated quarterly)
Reference: Notice 125/99 cancelled.

NOTICE	CHART	LOCALITY AND SUBJECT
		(1) MISCELLANEOUS
342(P)/97	- - - -	Canada - Loran-C lattices on nautical charts.
129(T)/99	- - - -	Canada - Safety of offshore exploration and exploitation vessels.
		(2) CANADIAN ARCTIC AND WEST COAST OF GREENLAND
847(P)/89	7740, 7083	Northwest Territories - Larsen Sound - Boothia Peninsula - Results of surveys.
634(P)/96	7371	Northwest Territories - Ellesmere Island - Alexandra Fiord - Off Skraeling Island -Result of survey.
666(P)/96	- - - -	Western Arctic - Great Slave Lake - Curtis Island - Light to be discontinued.
738(P)/96	6311	Northwest Territories - Lake Athabasca - Range lights to be discontinued.
751(P)/96	6311	Northwest Territories - Lake Athabasca - Range lights to be discontinued.
328(P)/98	- - - -	Northwest Territories - Fort Chipewyan to Fort McMurray - Changes to

			the buoyage system - 1998.
1510(P)/98	7760, 7733, 7083		Northwest Territories - Simpson Strait - Rae Strait - Shoal depths.
1727(P)/98	7760, 7083		Northwest Territories - Boothia Peninsula - James Ross Strait - Shoal depths.
577(P)/99	- - - -		Manitoba - Lake Winnipeg - Red River - Maintenance dredging.
		(3)	BRITISH COLUMBIA INCLUDING VANCOUVER ISLAND, QUEEN CHARLOTTE ISLANDS, FRASER RIVER, U.S. WEST COAST SOUTH TO 48°N., AND PUGET SOUND
967(T)/85	3441, L/C 3462, 3313		Vancouver Island - Saanich Inlet - Off Coal Point and Squally Reach - Moorings established temporarily.
575(T)/92	3313, 3441		Vancouver Island - Saanich Inlet - Patricia Bay - Sub-surface acoustic target established.
702(P)/92	3053		British Columbia - Shuswap Lake - Salmon Arm - Range lights established.
784(P)/92	3540, 3312		Vancouver Island - Discovery Passage - Campbell River - Information about fuel barge.
454(T)/93	3490		British Columbia - Fraser River - Sturgeon Bank - Cautionary light buoy established temporarily.
651(T)/93	3419		Juan de Fuca Strait - Esquimalt Harbour - Off Yew Point - ODAS/SADO buoy established temporarily.
669(T)/93	3958, 3964		British Columbia - Prince Rupert Harbour - Current meters established temporarily.
684(T)/93	L/C 3602, L/C 3001, L/C 3000		Off Vancouver Island - Subsurface mooring established temporarily.
279(T)/94	L/C 3000		Off Vancouver Island - Subsurface moorings established temporarily.
301(T)/94	3680, 3623, L/C 3604, L/C 3001, L/C 3000		Off Vancouver Island - Scientific subsurface mooring established temporarily.
303(T)/94	L/C 3604, L/C 3001, L/C 3000		Off Vancouver Island - Scientific subsurface mooring established temporarily.
733(T)/95	LC 3802		British Columbia - Dixon Entrance - Rose Spit - Racon temporarily relocated.
814(P)/96	3682, 3663, 3662		Vancouver Island, West Coast - Approaches to Esperanza Inlet - Shoal depths.
96(P)/97	3682, 3623		Vancouver Island, West Coast - Kyuquot Sound - Entrance to Fair Harbour - Shoal reported.
516(P)/97	3662		Vancouver Island, West Coast - Approaches to Esperanza Inlet - Shoal depth.
693(P)/97	3728		British Columbia - Milbanke Sound - Bardswell Group - Results of survey.

694(P)/97	3711	British Columbia - Milbanke Sound - Bardswell Group - Wurtele Island - Results of survey.
695(P)/97	3787	British Columbia - Milbanke Sound - Bardswell Group - Results of survey.
556(P)/99	3457	British Columbia - Nanaimo Harbour - Newcastle Island Passage - Caution note.

(AMA8035-10) (CCG-H99-044)

***755 LIST OF CHARTS AFFECTED BY (T) AND (P) NOTICES IN EFFECT MARCH 26, 1999**

(Revised and promulgated quarterly)

(Reference: Notice 126/99 cancelled)

CHARTS	(T) and (P) NOTICES
L/C 3000	684(T)/93, 279(T)/94, 301(T)/94, 303(T)/94
L/C 3001	684(T)/93, 301(T)/94, 303(T)/94
3053	702(P)/92
3312	784(P)/92
3313	967(T)/85, 572(T)/92
3419	651(T)/93
3441	967(T)/85, 575(T)/92
3457	556(P)/99
L/C 3462	967(T)/85
3490	454(T)/93
3540	784(P)/92
L/C 3602	684(T)/93
L/C 3604	301(T)/94, 303(T)/94
3623	301(T)/94, 96(P)/97
3662	814(P)/96, 516(P)/97
3663	814(P)/96
3680	301(T)/94
3682	814(P)/96, 96(P)/97
3711	694(P)/97
3728	693(P)/97
3787	695(P)/97
LC 3802	733(T)/95
3958	669(T)/93
3964	669(T)/93
6311	738(P)/96, 751(P)/96
7083	847(P)/89, 1510(P)98, 1727(P)/98
7371	634(P)/96
7733	1510(P)98
7740	847(P)/89
7760	1510(P)98, 1727(P)/98

(AMA8035-10-1) (CCG-H99-045)

***756(T) CANADA - Safety of offshore exploration and exploitation vessels.**

Reference: Notice 129(T)/99 cancelled.

1998 Annual Edition of Notices to Mariners, No. 20, pages A20-1 to A20-4.

Mariners are advised that offshore exploration and exploitation vessels are conducting drilling operations in the following approximate positions:

Well Name	Drilling Unit	Co-ordinates
Gulf of St. Lawrence		
NIL		

Well Name	Drilling Unit	Co-ordinates
Mackenzie Delta		
NIL		
Beaufort Sea		
NIL		
Yukon		
NIL		
Arctic Islands		
NIL		

For information on Nova Scotia or Newfoundland Offshore activities, please contact C-NSOPB (902)422-5588; C-NOPB (709)778-1400.

NOTE: Mariners are advised to obtain up-to-date position reports on drilling vessels and production installations before entering an area of exploration or exploitation. This information is available by contacting, as appropriate, ECAREG CANADA, NORDREG CANADA or CVTS OFFSHORE via any Marine Communications and Traffic Services Centre (MCTS).

(AMA8035-10-17) (NEB-H99-002)

***705 BRITISH COLUMBIA - BARKLEY SOUND - BROKEN GROUP - Raster File.**

Chart - 3670R/M (Continuation A)(NAD 83)(1)

1. Nautical Data International has reported that some raster software systems are experiencing problems, loading "Continuation A" of chart 3670. If you are experiencing problems, please visit the NDI website at www.ndi.nf.ca or call 1-800-563-0634.

NOTE: Digital data products 3670R/M may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-019)

753 UNITED STATES, WEST COAST - ROSARIO STRAIT - BELLE ROCK - Light.

Charts (Last correction) - LC 3461(NAD 27)(1)(536/99) - LC 3462(NAD 83)(2)(733/99)

1. Amend	Fl R 2.5 s 6 m 9 M to read F R 2.5 s 6 m 9 M	48°29'36" N 122°45'05" W (approx.)
2.	Fl R 2.5 s 6 m 9 M to read F R 2.5 s 6 m 9 M	48 29 35 N 122 45 09 W (approx.)

NOTE: Digital data products 3461R/M, 3462R/M, 70141(3461) and 70150(3462) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-026)

733 UNITED STATES, WEST COAST - ROSARIO STRAIT - BELLINGHAM CHANNEL - Wreck.

Charts (Last correction) - LC 3462(NAD 83)(1)(536/99) - 3313(Sheet 1, Vancouver Island) (NAD 83)(1) - 3601(NAD 83)(1)

1. Add	wreck with known depth of 7 metres	48°31'48".4 N 122°40'12".3 W

NOTE: Digital data products 3462R/M, 70113(3601) and 70150(3462) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-025)

***731 BRITISH COLUMBIA - HOWE SOUND - BOWYER ISLAND - Buoys.**

Charts (Last correction) - 3526(NAD 83)(1,2)(728/99) - 3311(Sheet 2)(NAD 83)(1,2)

1. Add	red and white conical buoy Priv	49°25'57" N 123°16'30".4 W
2.	red and white conical buoy Priv	49 24 58.2 N 123 16 07.3 W

NOTE: Digital data products 3526R/M and 70004(3526) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-021)

***728 BRITISH COLUMBIA - HOWE SOUND - SHOAL CHANNEL - Submarine cables.**

Charts (Last correction) - 3534 (Plan, Shoal Channel)(NAD 83)(1-4)(1728/98) - 3311(Sheet 1)(1,2,4,5) (NAD 83) (Sheet 2)(Howe Sound, Thornbrough Channel)(1,2)(NAD 83) (Sheet 3)(1,2,4,5)(NAD 83) (Sheet 3)(Inset, Gibsons)(2,4,6,7)(NAD 83) - 3526(NAD 83)(1,2,4,5)(505/99) - LC 3512(NAD 27) (1,5)(505/99)

1. Add	submarine cable	joining	49°23'49".6 N 123°30'02".6 W
			49 23 41.4 N 123 29 04 W
		and	49 23 38.8 N 123 29 00.8 W
2.	cable sign		49 23 49.5 N 123 30 03 W
3.	submarine cable	joining	49 23 45 N 123 30 00 W
			49 23 45.2 N 123 29 58.7 W
			49 23 45.3 N 123 29 58.2 W
			49 23 44.8 N 123 29 57.7 W
		and	49 23 22.4 N 123 29 30.7 W
4.	cable sign		49 23 44.9 N 123 30 00.5 W
5.	submarine cable	joining	49 23 45 N 123 30 00 W
		and	49 23 22.4 N 123 29 30.7 W
6.	submarine cable	joining	49 23 45 N 123 30 00 W
			49 23 45.2 N 123 29 58.7 W
			49 23 45.3 N 123 29 58.2 W
			49 23 44.8 N 123 29 57.7 W
		and	49 23 29.3 N 123 29 38.1 W
7.	submarine cable	joining	49 23 49.6 N 123 30 02.6 W
		and	49 23 44.2 N 123 29 26.2 W

NOTE: Digital data products 3512R/M, 3526R/M, 3534R/M, 70004(3526), 70013(3534) and 70142(3512) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-020)

***746 BRITISH COLUMBIA - VANCOUVER ISLAND - DEPARTURE BAY - INSKIP ROCK - Buoy.**

Charts (Last correction) - 3457(NAD 83)(1)(2115/98) - 3458(NAD 83)(1)(516/99) -3313 (Sheet 21) (Vancouver Island/Île de Vancouver) (NAD 83)(1)

On certain copies.

1. Amend	P14 to read PC against cautionary buoy	49°12'30" N 123°57'19" W

NOTE: Digital data products 3457R/M, 3458R/M, 70085(3457) and 70089(3458) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P98-037)

***730 BRITISH COLUMBIA - FITZ HUGH SOUND - RIVERS INLET AND KLAQUAEK CHANNEL - Depths and rock.**

Chart (Last correction) - 3934(NAD 83)(1-3)(537/99)

1. Add	1 metre 3 decimetres	51°29'30".6 N 127°41'59" W
2.	rock which covers and uncovers with a drying height of 0 metre 3 decimetres	51 29 29 N 127 42 08.6 W
3. Replace	8 metres 2 decimetres with 4 metres 4 decimetres	51 24 21.9 N 127 41 37.4 W

NOTE: Digital data products 3934R/M and 70131(3934) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-024)

***744 BRITISH COLUMBIA - MILBANKE SOUND - Chart amendment patch.**

Chart (Last correction) - 3728(NAD 27)(1)(818/96)

1. Affix	patch	52°10'00" N 128°27'00" W (approx.)

NOTE: Digital data products 3728R/M and 70044(3728) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-H99-067)

***743 BRITISH COLUMBIA - MILBANKE SOUND - Chart amendment patches.**

Chart (Last correction) - 3787(NAD 27)(1,2)(507/97)

1. Affix	patch	52°09'00" N 128°29'00" W (approx.)
2.	patch	52 14 00 N 128 26 30 W (approx.)

NOTE: Digital data products 3787R/M may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-H99-060)

***718 BRITISH COLUMBIA - CHATHAM SOUND - UNION INLET - Marine farm.**

Chart (Last correction) - 3960(NAD 83)(1)(1509/98)

1. Delete	marine farm symbol	54º38'54" N 130º22'33" W (approx.)

NOTE: Digital data products 3960R/M and 70069(3960) may also be affected. Contact Nautical Data International Inc. (NDI) or your local Value Added Remarketers (VAR) for updates.

(AMA8035-10-35) (DFO-P99-022)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

British Columbia, Volume 1, Fifteenth Edition, 1990 —

Page 75 — Paragraph 257, line 2
Delete: 028°–208°
Replace by: 027½–207½°

(P18/99)

Page 76 — Paragraph 275, lines 1 and 2
Delete: "0.4 mile" to end of paragraph.
Replace by: is 1 m (3 ft) high and a shoal with 6.1 m (20 ft) over it lies 0.4 mile north of Albert Head.

(P18/99)

Page 76 — Paragraph 276, lines 2 to 5
Delete: "A private" to end of paragraph.

(P18/99)

Page 88 — Paragraph 43, line 2
Delete: 1.8 m (6 ft)
Replace by: 1.5 m (5 ft)

(P18/99)

Page 90 — Delete paragraph 119
Replace by: 119 A **submarine pipeline** is laid at the south end of Cordova Spit and two **submarine pipelines** extend 0.9 mile off shore at **Bazan Bay**.

(P19/99)

Page 138 — Paragraph 357, line 3
Delete: 1987
Replace by: 1995 and 1997

(P17/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Pages 138, 139 and 140 — Delete paragraphs 358 to 383 inclusive
Replace by: Table: Major Port Facilities — Vancouver Harbour (west portion)

Major Port Facilities — Vancouver Harbour (west portion)

Berth	Wharf Length (m)	Least Depth (m)	Elevation (m)	Remarks
Canada Place Berths 1 and 2	314	10.7	2.8	Cruise ship terminal. Four automatic tide-sensored gangways. Fresh water, telephones, garbage disposal and 24-hr tug service. Conveyors and mobile cranes for handling baggage and stores. Baggage area 2,880 m^2. Dock apron 8,700 m^2.
Canada Place Berth 3	135	8.5	2.8	Cruise ship terminal. Four automatic tide-sensored gangways. Fresh water, telephones, garbage disposal and 24-hr tug service. Conveyors and mobile cranes for handling baggage and stores. Baggage area 2,880 m^2. Dock apron 8,700 m^2.
Canada Place Berths 4 and 5	326	9.6-10.2	2.8	Cruise ship terminal. Four automatic tide-sensored gangways. Fresh water, telephones, garbage disposal and 24-hr tug service. Conveyors and mobile cranes for handling baggage and stores. Baggage area 2,880 m^2. Dock apron 8,700 m^2.
Centerm Berth 3	179	11.0	2.6	Operated by Casco Terminals Ltd. (604)255-3531. Containers, forest products, breakbulk and general cargo. Four 40-tonne container cranes, 34.6-42.7 m outreach, forklifts, top and side lifters, yard tractors and trailers. On-dock intermodal railyard. 18,580 m^2 covered storage, 204,380 m^2 open storage and 8,800TEU's. 200 reefer outlets. Fresh water at 227 tonnes/hr and telephones. No shore gangway.
Centerm Berth 4	183	10.3	2.6	Operated by Casco Terminals Ltd. (604)255-3531. Containers, forest products, breakbulk and general cargo. Four 40-tonne container cranes, 34.6-42.7 m outreach, forklifts, top and side lifters, yard tractors and trailers. On-dock intermodal railyard. 18,580 m^2 covered storage, 204,380 m^2 open storage and 8,800TEU's. 200 reefer outlets. Fresh water at 227 tonnes/hr and telephones. No shore gangway.
Centerm Berth 5	322	11.6-10.3	2.6	Operated by Casco Terminals Ltd. (604)255-3531. Containers, forest products, breakbulk and general cargo. Four 40-tonne container cranes, 34.6-42.7 m outreach, forklifts, top and side lifters, yard tractors and trailers. On-dock intermodal railyard. 18,580 m^2 covered storage, 204,380 m^2 open storage and 8,800TEU's. 200 reefer outlets. Fresh water at 227 tonnes/hr and telephones. No shore gangway.
Centerm Berth 6	322	15.1-11.6	2.6	Operated by Casco Terminals Ltd. (604)255-3531. Containers, forest products, breakbulk and general cargo. Four 40-tonne container cranes, 34.6-42.7 m outreach, forklifts, top and side lifters, yard tractors and trailers. On-dock intermodal railyard. 18,580 m^2 covered storage, 204,380 m^2 open storage and 8,800TEU's. Fresh water at 227 tonnes/hr, power (220/440v) and telephones. No shore gangway.
Ballantyne Pier North Berth	212	13.4	2.2	General cargo, woodpulp and cruise ships. 18,600 m^2 covered storage, 4,000 m^2 open storage and passenger terminal. On-dock rail service, two shore gangways. Baggage area 2,320 m^2. Dock apron 10,100 m^2. Fresh water at 181 tonnes/hr, telephones, garbage disposal, 24-hr tug service.
Ballantyne Pier East Berth	364	13-9.5	2.2	General cargo, woodpulp and cruise ships. 18,600 m^2 covered storage, 4,000 m^2 open storage and passenger terminal. On-dock rail service, two shore gangways. Baggage area 2,320 m^2. Dock apron 10,100 m^2. Fresh water at 181 tonnes/hr, telephones, garbage disposal, 24-hr tug service.
Cerescorp Terminal Deep-sea Berth	200	9.5	3.4	Steel, breakbulk, pulp, newsprint and lumber. Mooring buoys and dolphins. 2,800 m^2 covered storage, 4,046 m^2 open storage. On-dock railway. Fresh water at 54 tonnes/hr and telephones. No shore gangway.

Major Port Facilities — Vancouver (west portion)

Berth	Wharf Length (m)	Least Depth (m)	Elevation (m)	Remarks
Cerescorp Terminal Barge Berth	120			Steel, breakbulk, pulp, newsprint and lumber. Mooring buoys and dolphins. 2,800 m^2 covered storage, 4,046 m^2 open storage. On-dock railway. Fresh water at 54 tonnes/hr and telephones. No shore gangway
Rogers Sugar	144	11.3-7.0		Bulk sugar imports. Storage 31,745 tonnes raw sugar. Maximum discharge rate approx. 363 tonnes/day. Fresh water at 27 tonnes/hr and telephones. No shore gangway.
United Grain Growers East Berth	213	13.4		Bulk grain and grain products. Seven loading spouts, two belts with loading rate 600 tons/hr per belt. 102,070 tons storage. Fresh water 91 tonnes/hr and telephone. No shore gangway.
United Grain Growers West Berth	213	13.9-11.3		Bulk grain and grain products. Seven loading spouts, two belts with loading rate 600 tons/hr per belt. 102,070 tons storage. Fresh water 91 tonnes/hr and telephone. No shore gangway.
Vanterm Berths 1 and 2	340	10-9.5	2.5	Operated by Terminal Systems Ltd. (604)251-9200. Containers, forest products, project cargo, bulk liquid and general cargo. Five 40-tonne container cranes, side picks, yard tractors, chassis, lift trucks. On dock intermodal railyard. 288 reefer outlets. Underground pipeline for loading bulk liquid. Storage 11,613 m^2 covered storage, 22,296 m^2 open storage, 9,200 full TEUs, 3,000 empty TEUs.
Vanterm Berth 3	91	9.2	2.5	Operated by Terminal Systems Ltd. (604)251-9200. Containers, forest products, project cargo, bulk liquid and general cargo. Five 40-tonne container cranes, side picks, yard tractors, chassis, lift trucks. On dock intermodal railyard. 288 reefer outlets. Underground pipeline for loading bulk liquid. Storage 11,613 m^2 covered storage, 22,296 m^2 open storage, 9,200 full TEUs, 3,000 empty TEUs.
Vanterm Berth 4	183	11.0-9.8	2.5	Operated by Terminal Systems Ltd. (604)251-9200. Containers, forest products, project cargo, bulk liquid and general cargo. Five 40-tonne container cranes, side picks, yard tractors, chassis, lift trucks. On dock intermodal railyard. 288 reefer outlets. Underground pipeline for loading bulk liquid. Storage 11,613 m^2 covered storage, 22,296 m^2 open storage, 9,200 full TEUs, 3,000 empty TEUs.
Vanterm Berths 5 and 6	572	15.6-15.0	2.5	Operated by Terminal Systems Ltd. (604)251-9200. Containers, forest products, project cargo, bulk liquid and general cargo. Five 40-tonne container cranes, side picks, yard tractors, chassis, lift trucks. On dock intermodal railyard. 288 reefer outlets. Underground pipeline for loading bulk liquid. Storage 11,613 m^2 covered storage, 22,296 m^2 open storage, 9,200 full TEUs, 3,000 empty TEUs.
Vanterm Berth 7	228	14.6	2.5	Operated by Terminal Systems Ltd. (604)251-9200. Containers, forest products, project cargo, bulk liquid and general cargo. Five 40-tonne container cranes, side picks, yard tractors, chassis, lift trucks. On dock intermodal railyard. 288 reefer outlets. Underground pipeline for loading bulk liquid. Storage 11,613 m^2 covered storage, 22,296 m^2 open storage, 9,200 full TEUs, 3,000 empty TEUs.
Pacific Elevators Berth 1	134	10.1-9.2	1.9	Wheat, barley, canola and rye. Seven loading spouts at each berth. Loading rates 2,000 tonnes/hour. Fresh water at 91 tonnes/hr, telephones and shore gangway 9 m long.
Pacific Elevators Berth 2	244	11.8-9.0	1.9	Wheat, barley, canola and rye. Seven loading spouts at each berth. Loading rates 2,000 tonnes/hour. Fresh water at 91 tonnes/hr, telephones and shore gangway 9 m long.

Major Port Facilities — Vancouver (west portion)

Berth	Wharf Length (m)	Least Depth (m)	Elevation (m)	Remarks
Chart 3494				
Cascadia Grain Terminal Berth 1	274	15.2-15.0		Wheat, barley, flax, canola and durum wheat. Two belts, 7 spouts; loading rates 3,200 tonnes/hr. Storage 280,000 tonnes. Fresh water at 23 tonnes/hr, power (550v(3 phase) and 100 amps for lighting, telephones and shore gangways 9 and 18 m long.
Lynnterm Berths 1, 2, 3,4	915	15.8-14.4	1.9	Operated by Western Stevedore Co. Ltd. (604)986-2311. Forest products, general cargo and project cargoes. 53,200 m^2 covered storage, 27,113 m^2 open storage. Railway services warehouses. Reefer outlets.
Dow Chemicals Lynnterm Berth 4	200	15.8-12.8		Caustic soda solution, ethylene dichloride and ethylene glycol. 3 dolphins extend from east end, The north face of dolphins is for barges. South face of dolphins designed for vessels berthing port side to dock at a velocity not exceeding 0.1 m/sec. Berthing at slack water only with wind velocity less than 15 m/sec. Line pull on bollards not to exceed 75 tonnes. Allowable hull pressure: 20 t/m^2, maximum berthing force: 72.5 tonnes.
Chart 3493				
Seaboard International Berth 1	186	11.6	1.5	Forest products. 13,935 m^2 covered storage, 183,087 m^2 open storage. Forklifts and tractor trailers. Power (110v/15 amps), fresh water and telephones.
Seaboard International Berth 2	196	13.3-12.6	1.5	Forest products. 13,935 m^2 covered storage, 183,087 m^2 open storage. Forklifts and tractor trailers. Power (110v/15 amps), fresh water and telephones.
Seaboard International Berth 3	196	12.9-12.6	1.5	Forest products. 13,935 m^2 covered storage, 183,087 m^2 open storage. Forklifts and tractor trailers. Power (110v/15 amps), fresh water and telephones.
Neptune Bulk Terminals				Coal, potash, feed pellets, chemical fertilzers, canola oil and phosphate rock. Open storage 600,000 tonnes (coal), covered storage 207,000 tonnes (potash), 10,000 tonnes (pellets), 55,000 tonnes phosphate rock and 19,000 tonnes tank storage for oil. Six tank car unloading stations for oil at Berths 1 and 2. Shore gangways at all berths. Fresh water, power (440v (3 phase) 30 amps, 110/220v (single phase) and telephones.
Neptune Bulk Terminals Berth 1	230	15.0	1.6	Coal loading. Handles ships to 180,000 dwt. Two quadrant ship loaders at 2,500 tonnes/hr. Travelling stacker/reclaimer rated at 1,000 tonnes/hour.
Neptune Bulk Terminals Berth 2	229	15.0	1.6	Potash and dry bulk. Loads Panamax-size vessels of 80,000 dwt. Two quadrant ship loaders at 2,000 tonnes/hr each, 3,500 tonnes/hr. combined.
Neptune Bulk Terminals Berth 3	250	13.0-12.8	1.6	Phosphate rock and salt. Handles ships to 55,000 dwt. Two receiving bridges with hoppers. Each receiving bridge capacity 1,000 tonnes/hr; hopper capacity 50 tonnes each.
Saskatchewan Wheat Pool – Berth 1	230	15.0	2	Wheat, durum wheat, canola, barley and grain by-products. Loading via two belts at 1,200 tonnes/hr each, five spouts at each berth. Storage 240,000 tonnes.
Saskatchewan Wheat Pool – Berth 2	230	12.0	2	Wheat, durum wheat, canola, barley and grain by-products. Loading via two belts at 1,200 tonnes/hr each, five spouts at each berth. Storage 240,000 tonnes.
Pioneer Grain Terminal	180	14.4	2	Wheat, canola, barley, rye, flax and grain by-products. Two Peco loaders at 1,000 tonnes/hr each. Storage 108,000 tonnes.

Major Port Facilities — Vancouver (west portion)

Berth	Wharf Length (m)	Least Depth (m)	Elevation (m)	Remarks
Pier 94 – West Berth	183	11.0-8.4		Operated by B.C. Ferry Corporation as assembly site for catamaran ferries. 5,000 m^2 covered storage, 36,681 m^2 open storage.
Pier 94 – East Berth	110	10.0		Operated by B.C. Ferry Corporation as assembly site for catamaran ferries. 5,000 m^2 covered storage, 36,681 m^2 open storage.
Vancouver Dry Dock	220			Panamax floating dry dock. Dry docking, ship repair and industrial engineering.
Fibreco Export	137	12.8	1.7	Bulk wood chips. Berthing dolphins 73 m WSW and 55 m ENE off wharf. Designed for vessels of 48,162 tonnes displacement with a length of 194.4 m, beam 30.5 and 10.7 m draught. Berthing velocity at 10° approach not to exceed 0.1 m/sec. Loading by conveyor belt and pneumatic blower at maximum rate of 1,088 tonnes/hr. Bulk storage 100,000 bone dry units. Fresh water via 2" pipeline, power (120 v) and telephones. No shore gangway.
Vancouver Wharves				Copper and lead-zinc concentrates, inbound and outbound liquid methanol, pulp, paper, lumber, sulphur, potash and fertilizers. Bulk storage 235,820 tonnes concentrates, 63,490 tonnes sulphur, 155,097 tonnes potash, 14 hectares open storage, 14,362 m^2 covered storage. Mobile equipment includes bulldozers, front end loaders, forklift trucks, straddle carriers and diesel locomotives. Fresh water, power (440v/220 amps-100 amps emergency, 3 phase AC) and telephones. No shore gangways.
Vancouver Wharves Berth 1	220	12.5		Loading concentrates at 907 tonnes/hr.
Vancouver Wharves Berths 2 and 3	328	11.6		Methanol receiving/storage and shipping. Breakbulk facility handling pulp, paper and lumber.
Vancouver Wharves Berth 4	201	11.9		Loading free flowing bulk at 4,081 tonnes/hr.
Vancouver Wharves Berth 5	201	12.5		Loading free flowing bulk at 1,814 tonnes/hr.

(P17/99)

Page 141 — Paragraph 394, lines 1 and 2
Page 141 — Paragraph 395, line 2
Page 141 — Paragraph 396, line 1
Delete: Versatile Pacific Shipyards
Replace by: Vancouver Dry Dock

(P17/99)

Page 141 — Delete paragraph 398.

(P17/99)

Page 141 — Paragraph 401, line 3 – after “Swartz Bay”
Insert: and Nanaimo (Duke Point)

(P17/99)

Page 143 — Paragraph 424, line 6
Delete: Alberta Wheat Pool No. 1
Replace by: Cascadia Grain Terminal

(P17/99)

Page 146 — Paragraph 458, line 4
Delete: 1987
Replace by: 1995 and 1997

(P17/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Page 146 — Delete paragraphs 459 to 466 inclusive
Replace by: Table: Major Port Facilities — Vancouver Harbour (east portion)

Major Port Facilities — Vancouver Harbour (east portion)

Berth	Wharf Length (m)	Least Depth (m)	Elevation (m)	Remarks
Chevron Canada	62	11.7		Berth length 110 m between mooring dolphins. Condition for approaching wharf best on first or last of ebb. Velocity during these periods seldom reach 1 kn and the set is uniformly from east, either at an angle or parallel with wharf. On flood tides the current direction is more uncertain and can reach 2½ kn. Light range at berth.
Berry Point Terminal	95	11.0		Variety of forest products. 48,560 m^2 open storage. Booming grounds and mooring buoys lie off wharf.
Shellburn Terminal Outer Berth	122	12.1		Petroleum products and styrene monomer. Mooring dolphins 154 m apart. Designed for berthing tankers with maximum overall length of 198 m, beam 27 m and 32,000 dwt. Designed maximum berthing velocity for a fully loaded tanker is 7.6 cm/sec. NOTE: velocity is lower than normally expected, extra precaution and assistance required to ensure velocity is not exceeded.
Shellburn Terminal Inner Berth	94	5.2		Petroleum products and styrene monomer.

Chart 3495

Westridge Terminals Trans Mountain Pipeline	91	11.4	2.8	Crude petroleum, petroleum products and jet fuel. Berth 305 m between extreme mooring dolphins, designed for vessels with maximum length of 250 m. Loading equipment: crude oil gravity feed 24" pipeline and 10" flexible hose connection. Loading rate 2,900 to 4,000 m^2/hr, unloading 1,375 m^2/hr. Fresh water at 13.6 tonnes/hr, power (220-440v/100 amps, telephone and shore gangway. NOTE: Contact terminal for specific equipment requirements.
Petro Canada West Jetty	43	12.6	1.5	Berth 90 m between mooring dolphins designed for vessels 50,000 dwt. Petroleum products handled via pipelines at 3,637 to 4,546 lmp. Fresh water at 54 tonnes/hr.
Petro Canada East Jetty	40	6.1	2.9	Petroleum products via pipeline at 3,637 to 4,546 lpm. Fresh water at 91 tonnes/hr and telephone.
Pacific Coast Terminals Berth 1	217	13	2.4	Sulphur. Handles ships up to 70,000 dwt. Travelling shiploader at 3,000 tonnes/hr. Bulk storage 235,000 tonnes sulphur, 35,000 tonnes ethylene glycol and 11,200 tonnes styrene monomer. Fresh water at 27 tonnes/hr and telephones.
Pacific Coast Terminals Berth 2	165	12.5	2.4	Sulphur, petrochemical liquids. Travelling shiploader at 18,000 tonnes/hr. Ethylene glycol at 675 tonnes/hr, styrene monomer 500 tonnes/hr. Bulk storage 235,000 tonnes sulphur, 35,000 tonnes ethylene glycol and 11,200 tonnes styrene monomer. Fresh water at 27 tonnes/hr and telephones.
Ioco Refinery Berth 1	165	9.2	2.1	Petrochemicals and petroleum products. Mooring dolphins off each end for vessels to 35,000 dwt. Products conveyed by pipeline and hose at 4,000 bbls/hr. Fresh water at 23 tonnes/hr and telephone. Berths for barges and coastal tankers east of main wharf.

Major Port Facilities — Vancouver Harbour (east portion)

Berth	Wharf Length (m)	Least Depth (m)	Elevation (m)	Remarks
Chart 3494				
Canadian Occidental Petroleum South Berth	152	10.1-9.9	1.8	Imports bulk sea salt, exports chlorine, caustic soda and muriatic acid. Bulk storage 27,000 tonnes salt, three tanks 11,000 tons each. Fresh water at 13.6 tonnes/hr and 5 m shore gangway. Two sets range lights mark limit of deep water close to shore.
Canadian Occidental Petroleum West Berth	76	8.5-6.6	1.8	Imports bulk sea salt, exports chlorine, caustic soda and muriatic acid. Bulk storage 27,000 tonnes salt, three tanks 11,000 tons each. Fresh water at 13.6 tonnes/hr and 5 m shore gangway. Two sets range lights mark limit of deep water close to shore.

(P17/99)

Page 150 — Paragraph 565, line 3 – after "NW part."
Insert: Private **mooring buoys** are on these shoals.

(P14/99)

Page 157 — Paragraph 742.1 (Re: correction promulgated in Monthly Edition No. 10/98)
Delete: "P14"
Replace by: "PC"

(P15/99)

Page 277 — Before paragraph 170 (Re: correction promulgated in Monthly Edition No. 3/96)
Delete: *Charts 3662, 3640, 3604, 3603, 3674*
Replace by: *Charts 3604, 3603*

(P13/99)

Page 277 — Before paragraph 172
Delete: *Chart 3662*
Replace by: *Chart 3604*

(P13/99)

Page 296 — Before paragraph 202
Delete: *Chart 3663*
Replace by: *Chart 3676*

(P13/99)

Page 296 — Paragraph 212, line 4
Delete: 5 feet (1.5 m) and Middle Reef is 4 feet (1.2 m)
Replace by: 4 feet (1.2 m) and Middle Reef is 3 feet (1 m)

(P13/99)

Page 296 — Paragraph 216, line 3
Delete: "several rocks" to end of sentence.
Replace by: rocks with 7 and 4 feet (2.1 and 1.3 m) over them.

(P13/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Page 296 — Paragraph 220, line 1
Delete: 8 feet (2.4 m)
Replace by: 7 feet (2 m)

(P13/99)

Page 296 — Paragraph 220, line 2
Delete: 2 feet (0.6 m)
Replace by: 3 feet (1 m)

(P13/99)

Pages 297, 298, 299 and 300 — Top left corner
Delete: *Chart 3663*
Replace by: *Chart 3676*

(P13/99)

Page 297 — Paragraph 220, line 3
Delete: 10 feet (3 m)
Replace by: 9 feet (2.7 m)

(P13/99)

Page 297 — Paragraph 222, line 4
Delete: 8 fathoms (15 m)
Replace by: 46 feet (14 m)

(P13/99)

Page 297 — Paragraph 223, line 4
Delete: 10 feet (3 m)
Replace by: 9 feet (2.7 m)

(P13/99)

Page 297 — Paragraph 242, lines 3 and 4
Delete: 32 feet (9.8 m)
Replace by: 31 feet (9.6 m)

(P13/99)

Page 297 — Paragraph 252, line 2
Delete: 9 feet (2.7 m)
Replace by: 7 feet (2.1 m)

(P13/99)

Page 297 — Paragraph 254, line 2
Delete: 15 feet (4.6 m)
Replace by: 16 feet (5 m)

(P13/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Page 299 — Paragraph 261, lines 2 and 3
Delete: 13 feet (4 m)
Replace by: 12 feet (3.8 m)

(P13/99)

Page 299 — Paragraph 264, lines 1 and 2
Delete: "**Marine farm**" to end of sentence.

(P13/99)

Page 299 — Paragraph 265, line 5
Delete: 5 feet (1.5 m)
Replace by: 7 feet (2.1 m)

(P13/99)

Page 299 — Paragraph 265, line 7
Delete: (0.6 m)
Replace by: (0.7 m)

(P13/99)

Page 299 — Paragraph 266, lines 2 and 3
Delete: "A fish" to end of paragraph.

(P13/99)

Page 299 — Delete paragraphs 271 and 272.

(P13/99)

Page 300 — Paragraph 286, line 3
Delete: 10 feet (3 m)
Replace by: 11 feet (3.3 m)

(P13/99)

Page 300 — Paragraph 286, line 4
Delete: a least depth of 27 feet (8.2 m)
Replace by: less than 1 foot (0.1 m) over it

(P13/99)

Page 300 — Paragraph 287, line 2
Delete: less than 6 feet (1.8 m)
Replace by: 3 feet (0.8 m)

(P13/99)

Page 300 — Paragraph 288, line 1
Delete: 17 feet (5.2 m)
Replace by: 26 feet (8 m)

(P13/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Page 300 — Paragraph 289, line 4
Delete: 32 foot (9.8 m) shoal
Replace by: 15 foot (4.5 m) rock

(P13/99)

Page 300 — Paragraph 291, last line (Re: correction promulgated in Monthly Edition No. 12/96)
Delete: (3.4 m)
Replace by: (3.3 m)

(P13/99)

Page 300 — Before paragraph 294
Delete: *Chart 3664*
Replace by: *Chart 3675*

(P13/99)

Page 300 — Paragraph 301, line 3
Delete: 10 feet (3 m)
Replace by: 13 feet (4 m)

(P13/99)

Page 300 — Paragraph 301, line 4
Delete: *(see Chart 3662)*

(P13/99)

Pages 301 and 302 — Top left corner
Delete: *Chart 3664*
Replace by: *Chart 3675*

(P13/99)

Page 302 — Paragraph 311, line 4
Delete: 9 and 11 feet (2.7 and 3.4 m)
Replace by: 10 feet (3 and 3.2 m)

(P13/99)

Page 302 — Paragraph 335, lines 2 and 3
Delete: less than 6 feet (1.8 m)
Replace by: 3 feet (1 m)

(P13/99)

Page 302 — Before paragraph 340
Delete: *Chart 3665*

(P13/99)

Page 303 — Before paragraph 345
Delete: *Charts 3663, 3664*
Replace by: *Charts 3675, 3676*

(P13/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Page 303 — Before paragraph 348
Delete: *Chart 3664*
Replace by: *Chart 3675*

(P13/99)

Page 303 — Before paragraph 355
Delete: *Chart 3663*
Replace by: *Chart 3676*

(P13/99)

Page 303 — Paragraph 361, lines 1 to 3
Delete: "The charted … exist (1988)."

(P13/99)

Page 303 — Before paragraph 365
Delete: *Chart 3665*

(P13/99)

Page 303 — Delete paragraph 373.

(P13/99)

Page 304 — Top left corner
Delete: *Chart 3665*
Replace by: *Chart 3676*

(P13/99)

Page 304 — Before paragraph 387
Delete: *Chart 3664*
Replace by: *Chart 3675*

(P13/99)

Page 304 — After paragraph 388
Add: 388.1 **Marine farm** facilities are in the cove north of **Three Bay Cove**.

(P13/99)

Page 304 — Paragraph 389, lines 3 and 4
Delete: which dries 6 feet (1.8 m)
Replace by: with less than 6 feet (2 m) over it

(P13/99)

Page 304 — Paragraph 391, line 3
Delete: "floating" to end of paragraph.
Replace by: campsite with a float.

(P13/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Page 304 — Paragraph 392, line 2
Delete: (0.6 m)
Replace by: (0.5 m)

(P13/99)

Page 304 — Paragraph 395, lines 3 and 4
Delete: 27 feet (8.2 m)
Replace by: 28 feet (8.4 m)

(P13/99)

Page 304 — After paragraph 395
Add: 395.1 **Marine farm** facilities, marked by buoys, are on both shores at the head of the bay.

(P13/99)

Page 304 — Paragraph 396, line 3
Delete: (2.7 m)
Replace by: (2.6 m)

(P13/99)

Page 305 — Top left corner
Delete: *Chart 3664*
Replace by: *Chart 3675*

(P13/99)

Page 305 — Before paragraph 418
Delete: *Chart 3665.*

(P13/99)

Page 306 — Top left corner
Delete: *Chart 3665*
Replace by: *Chart 3675*

(P13/99)

Page 306 — Before paragraph 431
Delete: *Chart 3664.*

(P13/99)

Small Craft Guide, Trent-Severn Waterway, Seventh Edition, 1989 —

Page 35 — Paragraph 60
Cancel correction promulgated in Weekly Edition No. 36/93.

(C16/99)

SAILING DIRECTIONS AND SMALL CRAFT GUIDE CORRECTIONS

Small Craft Guide, British Columbia, Volume 1, Seventh Edition, 1989 —

Page 99 — Paragraph 109, lines 7 and 8
Delete: "This lighthouse" to end of paragraph.

(P16/99)

Page 109 — Paragraph 240, line 3
Delete: 028°–208°
Replace by: 027½–207½°

(P18/99)

Page 109 — Paragraph 248, lines 1 to 4
Delete: "with 6.1 m" to end of paragraph.
Replace by: is 1 m (3 ft) high and a shoal with 6.1 m (20 ft) over it lies 0.4 mile north of Albert Head.

(P18/99)

Page 109 — Paragraph 250, line 1
Delete: **Buoy**. —

(P18/99)

Page 109 — Paragraph 250, lines 3 to 5
Delete: "A private white" to end of paragraph.

(P18/99)

Page 122 — Paragraph 467, line 3
Delete: 6 feet (1.8 m)
Replace by: 5 feet (1.5 m)

(P18/99)

Page 127 — Delete paragraph 68
Replace by: 68 A **submarine pipeline** is laid at the south end of Cordova Spit and two **submarine pipelines** extend 0.9 mile off shore at **Bazan Bay**.

(P19/99)

Page 178 — Paragraph 454.1 (Re: correction promulgated in Monthly Edition No. 10/98)
Delete: "P14"
Replace by: "PC"

(P16/99)

CANADIAN COAST GUARD
MARINE INFORMATION REPORT AND SUGGESTION SHEET

Navigating Officer or Observer: _____ Captain: _____

Ship (*or address*) _____

If Merchant Vessel add Line *or* Company with Head Office address: _____

General locality: _____
Subject: _____
Approx. position: _____ Lat. _____ Long. _____
Chart No. used to plot: _____ *(Corrected to N/N No. _____ of 19 _____)* _____
Publications affected: *(Quote Volume and page)* _____
* Full details *(Attach additional sheets as necessary)*
Time (UTC) _____ Date _____

INSTRUCTIONS:

Mariners are requested to notify the responsible authorities when new or suspected dangers to navigation are discovered, changes are observed in aids to navigation, or corrections to publications are seen to be necessary.

* *In the case of new or suspected dangers to navigation, it is important that all details be given in order to aid with future investigations. Items of interest include heights, depths, physical description, type of bottom and equipment method used to position the item. It is helpful to mark details on chart, which will be promptly replaced by the Canadian Hydrographic Service.*

Reports should be made to the nearest Marine Communications and Traffic Services Centre and should be confirmed in writing to:

Director, Marine Aids,
Coast Guard,
Department of Fisheries and Oceans,
Ottawa, Ontario, K1A 0E6

In the case of information Canadian navigational aids or the List of Lights, Buoys and Fog Signals.

OR

Dominion Hydrographer,
Canadian Hydrographic Service,
Department of Fisheries and Oceans,
Ottawa, Ontario, K1A 0E6

In the case of new or suspected dangers to navigation, or where corrections to "Sailing Directions" appear to be necessary.