

INTERNATIONAL HYDROGRAPHIC
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE
INTERNATIONALE

NAUTICAL CARTOGRAPHY WORKING GROUP (NCWG)

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

Chair: Jeff WOOTTON
Australian Hydrographic Service
8 Station Street, Wollongong, NSW, 2500
Australia

Tel: +61 2 4223 6508
Email: jeff.wootton@defence.gov.au

Secretary: Andrew HEATH-COLEMAN
United Kingdom Hydrographic Office
Admiralty Way, Taunton, Somerset
United Kingdom

Tel: +44 1823 337900 ext 1404
Email: andrew.coleman@ukho.gov.uk

NCWG Letter: 05/2016

UKHO ref: HA317/010/031-13
AHS ref: FAA170900

Date 7 July 2016

Dear Colleagues

Subject: NCWG2 Actions 10, 15, 23, 25, 26, 43

The subject Actions are all listed as actions to be initiated by the Secretary.

Annex A lists the relevant NCWG2 actions, with associated extracts from the NCWG2 Report, followed by further discussion under the heading 'Outcome' leading to suggested revised or additional S-4 text.

Annex B is a response form. You are requested to consider the proposed S-4 texts and any unresolved issues carefully, complete the Response form accordingly, and return it to me by 1 September 2016.

Yours sincerely,

Andrew Heath-Coleman
Secretary NCWG

Annex A: NCWG2 Actions 10, 15, 23, 25, 26, 43

Annex B: Response form

NCWG2 Actions 10, 15, 23, 25, 26, 43

The following lists NCWG2 Actions requiring substantive changes to S-4, followed by the associated extracts from the NCWG2 report. The associated Explanatory Notes (ENs) are listed in the NCWG2 report extract below and can be viewed on the NCWG2 page of the IHO website, if required. Discussions follow under the heading 'Outcome' with suggested changes to S-4 shown in red, with deletions crossed through. In some cases of new S-4 clauses, the original proposal to NCWG is shown in black, with changes from the proposal in red; this is stated in the 'Outcome' section.

Action NCWG2/10: Secretary to draft specifications for user activated AtoN and circulate to WG for comment and approval.

NCWG2 Report Extract:8.1 Radio-activated Aids to Navigation (**US, CA**)

Docs: NCWG2-08.1A *Radio Activated Aids to Navigation (+ 3 Annexes)*
Presentation available

Colby Harmon (US) gave a presentation on recommendations for charting mariner activated aids to navigation. The meeting accepted the recommendations as follows:

'man' approved as an INT abbreviation for 'manually or mariner activated'

Example descriptions: Horn (man – see Note); Fl.G.3s (man – see Note).

Two example notes to be included in S-4 (as in paper).

Outcome:

From EN NCWG2-08.1A Annexes A, B and C, with changes following NCWG2 discussions in red:

Add to:

B-122.1 Man Manually activated P56, R2

New clause:

B-452.9 **Manually activated fog signals** must be depicted by a legend containing the **international abbreviation 'man'**, after the signal type, for example:

Horn (man - see Note)

Text should be sloping if associated with a floating aid. A note should be inserted to describe: the type of signal, activation method, channel/frequency, **and** duration of signal activation or to refer to an associated publication for details. For example:

Manually Activated **Sound Fog** Signal (man)
Sound Fog signal is activated by keying the **microphone** 5 times on
VHF-FM Ch 81. Horn will operate for 30 minutes.

or

Manually Activated **Fog Sound** Signal (Man)
For activation **method** details, see [associated publication].

New clause:

B-473.8 **Manually activated lights** must be depicted by a legend containing the **international abbreviation 'man'**, after the light description, for example:

★ Fl.G.3s (man - see Note)

Text should be sloping if associated with a floating aid. A note should be inserted to describe: the activation method, channel/frequency, **and** duration of light activation or to refer to an associated publication for details. For example:

Manually Activated Light (man)
Light is activated by keying the **microphone** 5 times on
VHF-FM Ch 81. Light will operate for 30 minutes.

or

Manually Activated Light (Man)
For activation **method** details, see [associated publication].

New entries for INT1:

P56	(man)	Manually activated		473.8
R2	(man)	Manually activated		452.9

In INT1 list of abbreviations, add: **man** Manually activated P56, R2

Notes:

NCWG2 agreed not to include a new line in B-471.1 (as suggested in EN NCWG2 – 08.1A Annex B) as ‘manually activated’ is not a type of light in the same sense as Aero, Dir and Ldg, which are included as pre-fixes to the light description. It is a qualification to any type of light, more like ‘(occas)’, to be included in parenthesis, subordinate to the light description.

Within the discussions at NCWG, recorded above, we have used the terms ‘Radio-activated’, ‘Manually activated’, ‘Mariner activated’ and ‘user activated’. All accurately describe what happens. Given that four US/CA organizations (as mentioned in the US EN NCWG2-08.1A) have already agreed to use the abbreviation ‘man’, and that it works in English, French and Spanish, unless there is a strong argument to change to one of the other descriptions, we should accept this. Therefore I have not included the ‘(or Mariner)’ insertions in the term, as mentioned in the NCWG2 Report.

If retaining separate notes, I have replaced ‘Horn’ by ‘Fog signal’ to make it more generic, as ‘Fog signal’ better conforms to S-4 and INT1. However, presumably, if manually activated fog signals and lights occur on the same chart, the note could be combined, by replacing ‘Horn’ or ‘Fog signal’ and ‘Light’ by a generic ‘Aid to navigation’. We could consider making the note always generic in this way, although we should probably retain two separate entries in S-4. Note that these are example notes for S-4, which HOs can adapt to suit their own situations or terminology.

The abbreviation ‘mic’ may be familiar for English speakers, but perhaps less so for chart users for whom English is not first language. It is not listed in S-4 or INT1 as an international abbreviation, so we should use the full word ‘microphone’.

Action NCWG2/15: Secretary to amend draft for sub-surface floating pipeline and circulate to WG for comment and approval.

NCWG2 Report Extract:

8.4 Suspended submarine pipelines: *Presentation (TR)*
Docs: NCWG2-08.4A Rev2 Suspended Submarine Pipeline
Presentation available

Bülent Gürses (TR) showed some pictures of the construction phase of the sub-surface floating pipeline, which helped the meeting understand the details of this feature. The recommended addition to S-4 in the paper was generally accepted with the following amendments:

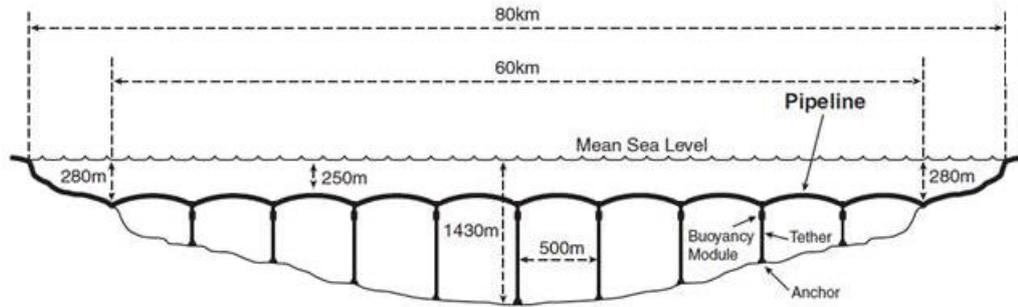
B-444.9 Sub-surface pipelines that are floating in the water column and anchored....

The example diagram should be adjusted to remove the appearance of buoys above the pipeline and to show the depth marker above the highest part of the arc.

Outcome:

Taken from EN NCWG2-08.04A, with changes following NCWG2 discussions in red. I have changed ‘anchored’ to ‘tethered’ and ‘pontoon’ to ‘buoyancy modules’ to match the diagram, but retained ‘anchored’ in the chart note, as it is probably a more familiar terms for mariners.

B-444.9 **‘Sub-surface pipelines’** describes pipelines that are floating in the water column. They are ~~anchored~~ **tethered** to the sea floor at regular intervals with large ~~buoyant ‘pontoon’~~ **‘buoyancy modules’** on the anchor hawsers, a little below the actual pipeline, so that it is submerged to a designed minimum depth. These pipelines do not generally constitute a danger to surface vessels, but are potentially a danger to submarines, and submarines and deep trawlers could ~~be a danger to damage~~ the pipeline. A ~~sample~~ **sample** schematic diagram of a ~~typical suspended submarine submerged~~ **sub-surface** pipeline is:



Sub-surface pipelines must be shown, where required, using the appropriate pipeline symbol as specified in clauses B-444.1 and B-444.2 above. To indicate the minimum design depth of the pipeline, a legend similar to *Water (submerged 250m – see Note)* must be placed along the pipeline, repeated as required if the pipeline extends across a substantial area of the chart. A cautionary note should be charted, for example:

WATER PIPELINE
 In depths greater than 280 metres the pipeline is anchored to the seabed at 500 metre intervals, so that it is submerged to a minimum depth of 250 metres. Mariners are advised not to anchor or trawl in the vicinity of submarine cables and pipelines.

If there are other conventional pipelines shown on the chart, the last sentence of the note should be excluded, and a generic pipeline note, such as that shown at clause B-444.1, positioned immediately above or adjacent to the **suspended-submarine-pipeline** note relating to the sub-surface pipeline.

A pictorial representation of the **sub-surface** pipeline, for example as shown above, may be included in addition to, or in lieu of, the note, in magenta, see B-390.1. If the diagram is included in lieu of the note, the legend along the pipeline symbol should read similar to *Water (submerged 250m – see Diagram)*.

Action NCWG2/23: Secretary to circulate proposed revisions on seagrass to S-4 to WG for approval.

NCWG2 Report Extract:

8.9 Seaweed and Seagrass (ES)

Docs: NCWG2-08.9A Seagrass/Seaweed (Macro-Algae) (+ 2 Annexes)

Presentation available

Federico Yanguas Guerrero (ES) presented the paper. There was general support to approve a new INT abbreviation 'Sg' for seagrass. The proposed symbol was not approved (it is too complex), nor an alternative to use the marsh symbol (C33) as it is already also used for above water reed beds, which might be confusing to the chart user. It was also decided that Coralline Algae should remain at J10 (as far as the mariner is concerned, the difference is unimportant).

Outcome:

Suggested amendments to S-4 and INT1, based on EN NCWG2-08.9A (including Annexes) and discussions at NCWG2.

B-122.1 Add new entry after 'sf': **Sg Seagrass J13.3**

B-425.5 Standard abbreviations. English language abbreviations should be used, as in the following list.

- ...
- | | | | |
|--------------|------------------|----------------------------|---|
| J9 .2 | <i>Bo</i> | -Boulders | (usually used in intertidal areas) |
| J10 | <i>Co</i> | -Coral and Coralline Algae | |
| J11 | <i>Sh</i> | -Shells | (skeletal remains) |
| J13.1 | <i>Wd</i> | -Weed | (including extensive areas of Kelp, see B-425.6 and B-428.2, etc) |
| J13.3 | <i>Sg</i> | -Seagrass | (where distinguished from weed, see B-425.6) |
| J30 | <i>f</i> | -fine | (only used in relation to Sand) |
- ...

B-425.6 ~~Currently unused.~~ **Marine vegetation** may be divided into two groups: Algae (seaweed, of which kelp is a large species) and Plants (seagrass). Many source documents do not distinguish between these groups, referring to them both as 'Wd'. However, seagrass is increasingly being protected so, if the information is available, it should be distinguished from seaweed by using the **international abbreviation 'Sg'**. For associated protection measures, see B-437. For plants which rise above the sea surface, see B-312.2 (marsh and reed beds) and B-321.4 (mangroves and nipa palms).

B-428.2 Kelp (large species of seaweed) is an indication of the presence of submerged rocks. It must normally be charted by the following symbol:

 **J13.2**

A legend may be used in place of the symbol, but only for extensive areas.

Wd **J13.1**

For seagrass, see B-425.6.

INT1 Add new line: **J13.3 Sg Seagrass**

Add new international abbreviation: **Sg Seagrass J13.3**

Action NCWG2/25: Secretary to draft amendment to S-4 to allow use of yellow for chart limits and circulate to WG for comment and approval.

Action NCWG2/26: Secretary to draft amendment to S-4 to include all options for referencing smaller scale and adjoining charts for consideration by the WG.

NCWG2 Report Extract:

8.10 Larger scale chart limits in yellow (**SE, NL**)

Docs: *NCWG2-08.10A*

Presentation of chart boundaries

NCWG2-08.10B

References to other charts

Andreas Andersson (SE) presented his 'A' paper on the colour used for chart boundaries (on multicolour charts). He advised the meeting that some magenta had been added to the yellow to make it clearer, following chart user feedback. Mikko Hovi (FI) also advised the meeting that user feedback had indicated that this method of de-cluttering was preferred to transferring the larger scale chart limits to a small diagram. The meeting agreed that this is a sensible method of de-cluttering the magenta layer and agreed it should be added as an option for multi-coloured charts.

Ben Timmerman (NL) presented his 'B' paper on references to smaller scale charts. The meeting agreed that this option should be included in S-4. Mikko Hovi (FI) suggested an alternative (to avoid words) of showing the smaller scale/adjoining chart number flanked by arrows and this was also well received. Options to use legends, for example 'adjoining chart'; 'smaller scale chart'; just the chart number, were also considered as appropriate, depending on the national convention.

Outcome:

The meeting agreed that the use of yellow for chart boundaries is a sensible method of de-cluttering the magenta layer. However, the general guidance on the use of colours (in B-140) does not cover the concept of de-cluttering the magenta layer by using different colours, only by using magenta tint, although this has become generally accepted for multicoloured charts. It is therefore time to include some brief explanation in an appropriate part of B-140. I suggest the following addition to 2nd paragraph of B-140, a revision of sub-paragraph B-142.3 and a new sub-paragraph B-142.4:

B-140 USE OF COLOUR

....

The use of alternative colours, for example red instead of magenta, and of screened colours, tends to reduce the level of possible standardization. However, such colour variations can, if desired, produce an element of national individuality without affecting the comprehensibility of a chart as much as, for example, a non-standard symbol. **Use of a non-standard colour, for example to reduce clutter on the magenta layer, should be referred to the Nautical Cartography Working Group (NCWG) for approval. It can then be included in this publication, to support standardization of multicoloured charts.**

B-142.3 Magenta tint ~~may must~~ be used ~~in congested areas where it is important not to obscure black detail, and~~ for specific symbols ~~such as including: Traffic Separation Zones; , Particularly Sensitive Sea Areas and Archipelagic Sea Lanes; Radar ranges and, when useful, for emphasizing restricted areas.~~ Magenta tint may also be used to subdue submarine cables and pipelines where they may obscure more important black or magenta detail.

B-142.4 The magenta layer on charts can become cluttered. Multicoloured print technology enables other colours to be used instead. For example, green was introduced for environmental information (see B-145 and B-437.2b) and yellow for chart limits on multicoloured charts (see B-254.2). When other colours are used to de-clutter the magenta layer, this should be referred to the NCWG (see B-140).

More specifically, both Actions 25 and 26 require some changes to B-254, as suggested below:

B-254 REFERENCES TO OTHER CHARTS

Hydrographic offices should include on their charts references to similar or larger scale charts published by their own nation; ~~references to smaller scale charts may also be included.~~ These fall into two categories:

- a. References in the border of the chart to adjoining charts of the same or similar scale, ~~to smaller scale charts~~ and to continuation insets.
- b. References to larger scale charts or plans which cover part of the area covered by the chart.

Note: **Insets**, including continuation insets and large-scale plans, are small charts with their own borders included within the limits of a larger chart. A **plan** is a large scale inset of a nautical chart (for example a port plan). For more detailed definitions, see the Hydrographic Dictionary, S-32.

Plans should not be printed on the back of a chart, see B-210.

For references to insets on Source diagrams, see B-293.6. For references to foreign charts, see B-254.4.

B-254.1 **Border references** should be shown in magenta and be worded ‘Adjoining chart...’, ‘~~See smaller scale chart...~~’ or ‘Continued in inset’, or equivalent, as appropriate. ~~If it is preferred to avoid the use of words, the adjoining chart number may be inserted on its own or, preferably, flanked by arrows pointing out of the chart to the next chart available, for example:~~

↑ 1234 ↑

B-254.2 **The limits of larger scale charts or plans** should be identified by numbered outlines in magenta, or by the legend ‘see Plan’ if the plan is on the same sheet. ~~On multicoloured charts, if it is preferred to subdue chart limits so that more important magenta detail stands out, the limits and associated numbers or text may be shown in yellow. The same tone of yellow as used for light flares is suitable, see B-470.4.~~

If there is more than one inset on a chart, they should be labelled A, B, C etc, and have letter identifiers added to the reference on the main chart, or in its border.

A charted outline ...

Action NCWG2/43: Secretary to draft new spec for ‘bubbler’ and circulate to WG for comment and approval.

NCWG2 Report Extract:

11.2 Vacant entries in INT1 (Task E4) **(Secretary)**

Docs: NCWG2-11.2A Vacant entries in INT1

NCWG2-11.2B US response re Fathoms and Compass Terms

NCWG2-11.2C US response re Floating Barriers and Oil Retention Barriers

Presentations available

Secretary presented the paper on vacant entries in INT1. Chair confirmed from participants that only US had some comments, after which Colby Harmon presented his papers...

Colby Harmon presented his ‘C’ paper on floating barriers. The meeting agreed:

- That the entries at F29.1 and N61 should be split to show barriers without and with pile supports. The example list at each entry should be the same (if INT1 subWG decides to retain both entries).
- That the ‘oil barrier’ entry at F29.2 should be replaced by the term ‘Bubbler’, using a magenta pipeline symbol with legend ‘Bubbler’.

- INT1 subWG to consider whether terms such as ‘e.g.’ and similar can be made consistent throughout INT1.

Outcome:

I have done further research into the use and terminology associated with ‘bubblers’. The term ‘bubbler’ seems most commonly associated with various toys, smoking pipes and drinking fountains. It may be used for the feature we are concerned with but, probably, only as a colloquial term. The term ‘pneumatic pipe’ has many applications, but not usually the one we are trying to depict. ‘Bubble curtain’ seems more accurately the term used for the feature we want to depict. It has various marine applications, including to: prevent acoustic transmission (such as pneumatic drilling and underwater explosions); prevent the spread of floating liquids (such as oil) or debris; to control the movement of fish. (It also has non-marine decorative use in aquariums). I suggest it is the best available term and should be the one we use on charts.

This is very different from the physical barriers which obstruct navigation depicted by F29.1 and N61, explained at B-449.2. We could use the vacant B-449.5, but possibly it is more appropriate to include it with other pipelines in the B-444 section. Although it could be added to B-444.1 under ‘Water pipelines’ as ‘Bubble emitting pipelines’, it is not primarily a ‘supply’ pipeline. I suggest it should be a separate category, at B-444.10 (noting use of B-444.9 at NCWG2 Action 15 above):

B-444.10 A **bubble curtain** (also known as a pneumatic pipe or ‘bubbler’) consists of a high pressure sub-surface pipeline (usually on the sea floor) with holes emitting a curtain of air bubbles. Its uses include: the prevention of acoustic transmission through the water; preventing the spread of surface debris or floating liquids (including oil); controlling the movement of fish.

A **bubble curtain** should be charted by a magenta pipeline symbol (L40.1) with the legend ‘*Bubble curtain*’ adjacent to it in sloping magenta text, preferably inside the containment area.

The NCWG2 meeting left the INT1subWG to consider how INT1 F29.1, F29.2 and N61 should be revised. I would find it useful if NCWG members provide some advice on F29.2 if the above wording for S-4 is agreed. We have agreed that the existing term, which until now has been for a vacant entry, needs to be revised. However, the proposed symbol is simply using an existing symbol shown at L40.1 with a self-explanatory legend; is it necessary therefore to have an entry in INT1 at all? If there should be an entry, would this be more appropriate at L45?

NCWG2 Actions 10, 15, 23, 25, 26, 43

Response Form
(please return to CSPCWG Secretary by 1 September 2016)
andrew.coleman@ukho.gov.uk

If you vote 'No' to any of the following questions, please explain in the 'Comments' section and provide suggestions for different wording.

Action	Question	Yes	No
10	Do you agree with the proposed additional international abbreviation 'man'?		
	Do you agree with the proposed new clause B-452.9?		
	Do you agree with the proposed new clause B-473.8?		
	Do you agree with the proposed additions to INT1?		
	Should we use the same generic 'Aids to navigation' note for both new clauses?		
15	Do you agree with the proposed new clause B-444.9?		
23	Do you agree to add a new international abbreviation for seagrass 'Sg'?		
	Do you agree with the proposed changes to B-425.5?		
	Do you agree with the proposed new clause B-425.6?		
	Do you agree to insert a new cross reference in B-428.2?		
	Do you agree with the proposed additions to INT1?		
25	Do you agree with the proposed addition to clause B-140 (2 nd paragraph)?		
	Do you agree with the proposed changes to clause B-142.3?		
	Do you agree with the proposed new clause B-142.4?		
	Do you agree with the proposed addition to clause B-254.2?		
26	Do you agree with the proposed changes to B-254?		
	Do you agree with the proposed changes to B-254.1?		
43	Do you agree that 'Bubble curtain' is the most appropriate term to describe the feature?		
	Do you agree with the proposed new clause wording?		
	Should the proposed new clause be placed at (choose one only):		
	a. B-444.10?		
	b. B-449.5?		
	c. Somewhere else (please specify under comments below)?		
	Is an entry required for INT1?		
If Yes, then should it be at (choose one only):			
a. F29.2?			
b. L45?			
c. Somewhere else (please specify under comments below)?			

Further comments:

Name:

Member State: