

NOS Instructions for DepthWiz Surveys
Effective February 1, 2006

DepthWiz has been adopted by the United States Power Squadrons (USPS) Cooperative Charting Committee and the National Ocean Service (NOS) as a method of collecting and submitting depth information for use on nautical charts. DepthWiz surveys are considered ***reconnaissance*** surveys. This means that NOS will not supercede shallower soundings or disprove charted wrecks, rocks, obstructions, high water lines and low water lines or shoals. In previous surveys that have been submitted there have been a growing number of concerns with the information that has been provided to NOS. Therefore, NOS has come up with these instructions for USPS members to use while using DepthWiz.

--DepthWiz Surveys shall not be done in areas that do not have hydrography. (Figure 1)

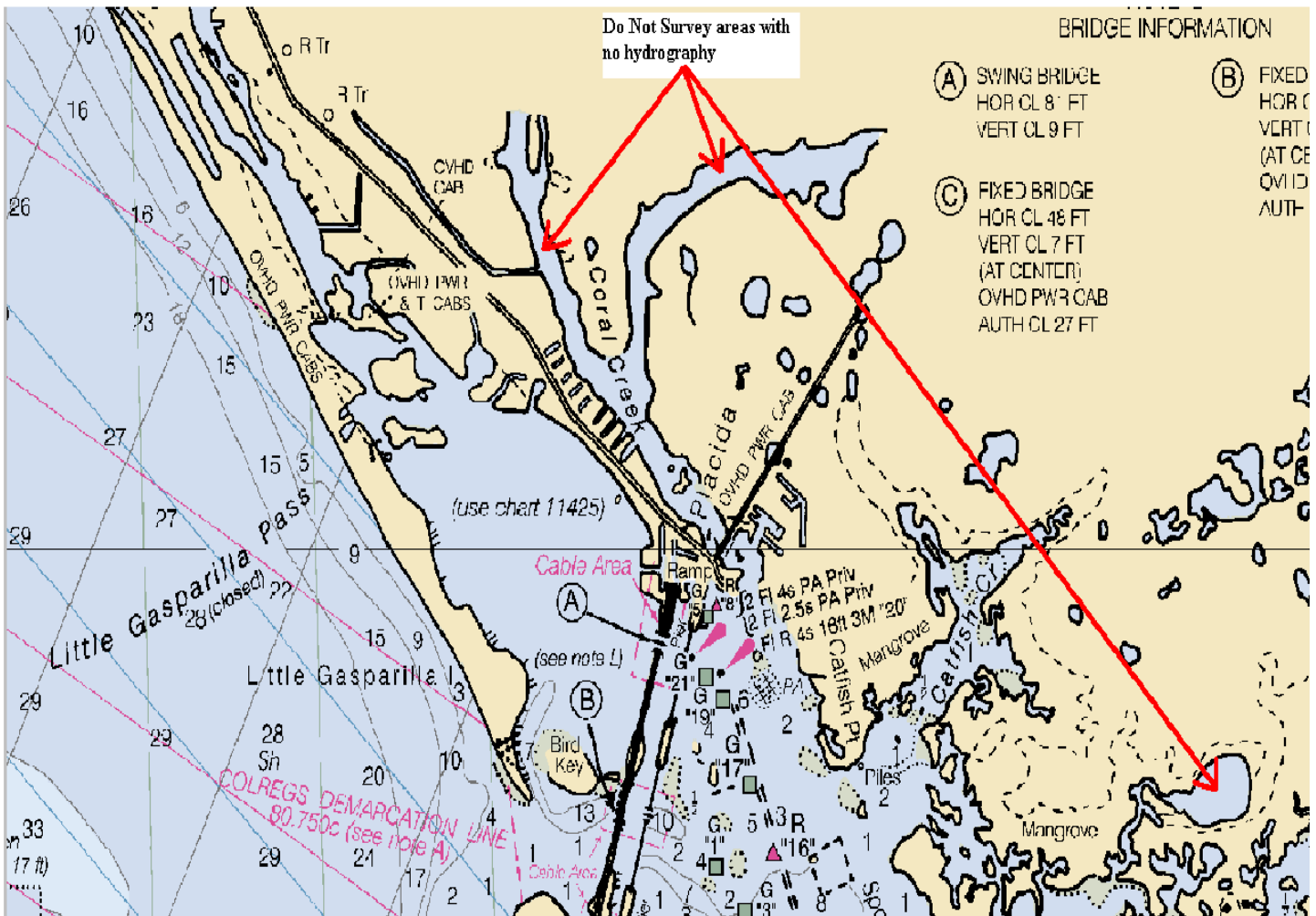


Figure 1

- DepthWiz surveys should not be done in areas where there is marsh (Green tinted areas).
- DepthWiz surveys should not be done in Federally maintained channels.
- Do not survey in Dumpsites, spoil areas and artificial reefs.
- DepthWiz surveys should be done in areas that have not been surveyed in decades (See Source Diagrams on Nautical charts).
- DepthWiz surveys should be run as perpendicular to the charted depth curves as possible. (Figure 2).

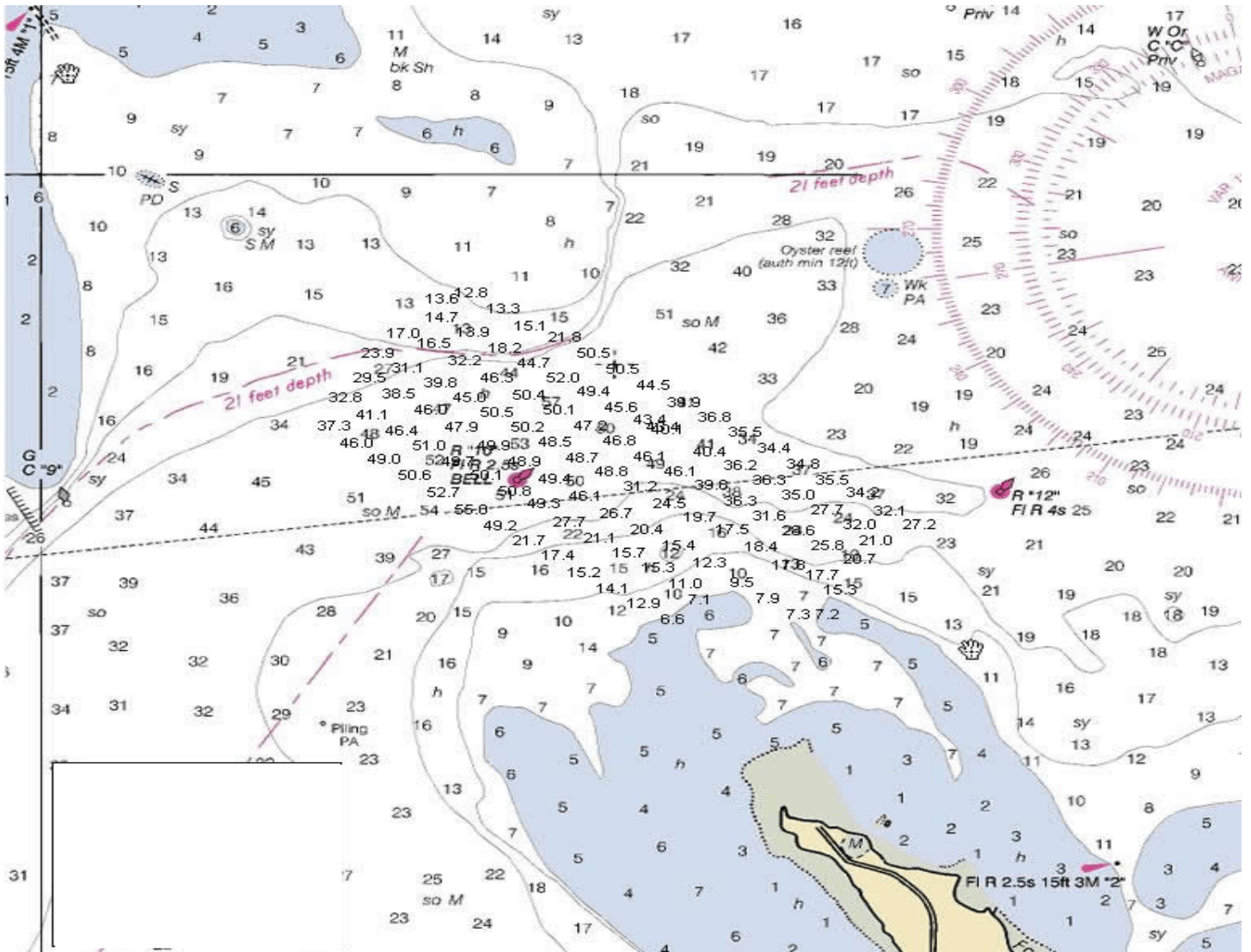


Figure 2

After a DepthWiz survey has been completed the USPS member or team shall analyze their data with the current NOS large scale chart to see if there are any shallower soundings or obstructions in the survey. This data will be plotted out on a NOS chart (see DepthWiz instructions version 3.4) and submitted along with the .dww file in their report. An example of the data that is plotted out is shown in Figure 3. Topographic maps, satellite images, etc do not take the place of a NOS chart and will not be accepted.

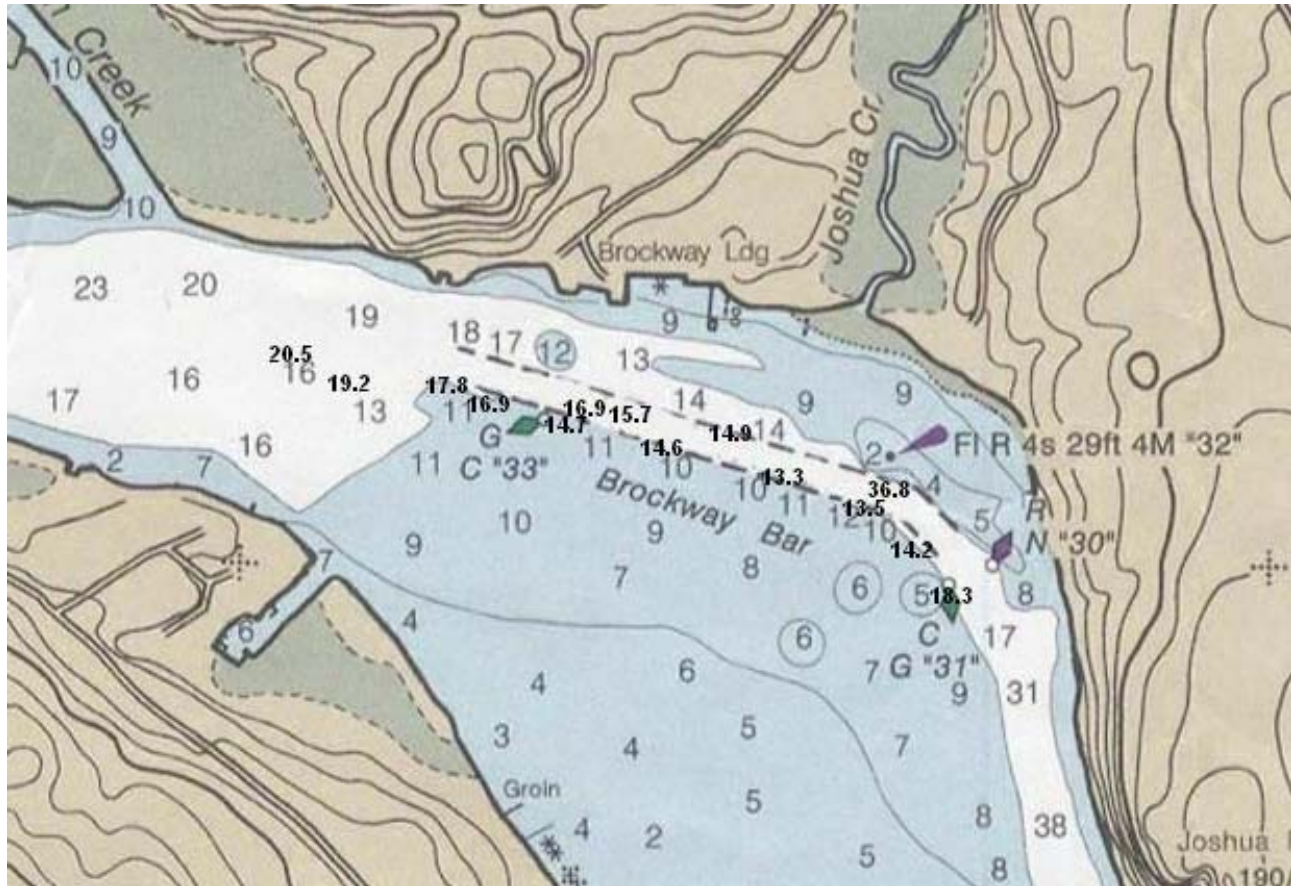


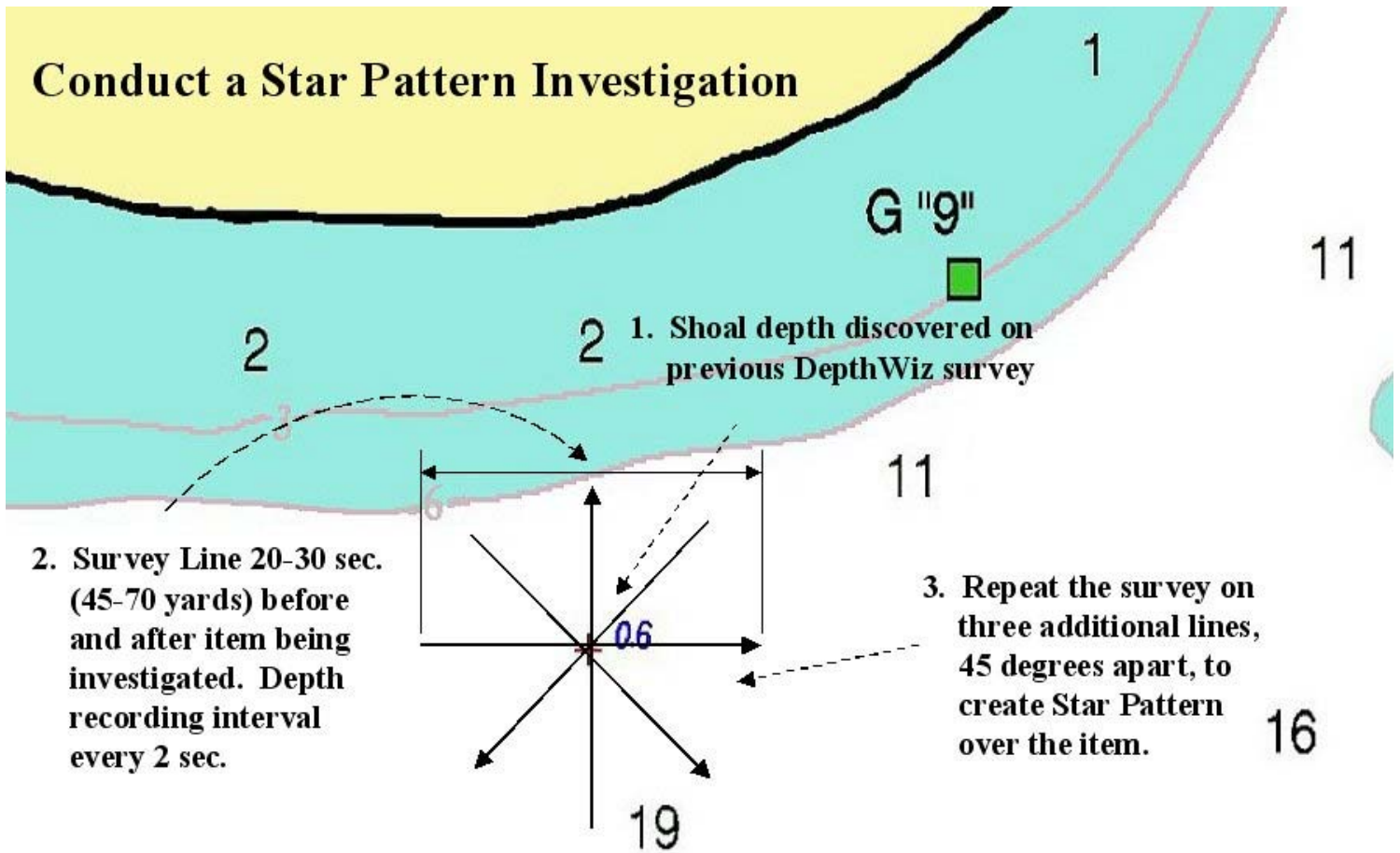
Figure 3

After a survey has been completed the USPS member should analyze their survey. If a shoaler sounding is found to be significant (significant soundings are more than 2-3 feet shoaler than the shallowest of the surrounding depths) in the initial survey then the USPS member must go back and investigate the sounding or soundings by using a Star pattern search (Figure 4). Watch the echo sounder near the point of investigation to see if you observe a spike or shoal that didn't get picked up in the original data. Please remember that a nautical chart is a legal document and NOS needs confirmation that these significant soundings actually exist before we chart the shoal.

In addition, the following criteria should also be considered.

- Does the sounding fall on the side of the channel
- Consider the type of draft of the vessel transiting the area
- Consider the slope of the bottom

For every shoal sounding that is found, a **separate .dww file** should be made along with the NOS chart showing the Star pattern search. So, if there are two shoal soundings then there should be three .dww files and three chart sections for that report.



(Figure 4)

For examples of when to survey and not to survey significant soundings see Figures 6-11.

A descriptive report (.txt file) can be created and will need to accompany the survey or information should be inputted in the description field. This report should be detailed. It should include the process in collecting the data, any interruptions in collecting the data, and any follow up survey information. The following fields (highlighted, see Figure 5) will be mandatory: transducer correction, tide information, number of satellites, performance measure type and performance measure value.

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F01  DEF File Signature      DEF
F02  File Version Type      3.03.00
F03  Program Name           DepthWiz
F04  Program Version Number 3.04.142
F05  Contact Name           Joe Surveyer
F06  Contact Phone Number   555-555-1212
F07  Contact Email Address  JoeSurveyer@qwickconnect.net
F08  File Contents Identifier 1
D10  UTC Time Correction    00
D11  Transducer Correction  0.8
D12  Prediction Correction  0.0
D13  Tides Method           Prediction Tables
D14  Pred. Corr. Method     No Corrections
D20  Tides Station Nbr     4
D21  Tides Station Name    Sebastian
D22  Prior Tide Date/Time  08/25/2004 13:04
D23  Prior Tide Height     0.1
D24  Next Tide Date/Time   08/25/2004 19:00
D25  Next Tide Height      0.4
D26  Station Distance Away 3.0
D27  Tides Data Source     Capn Tides
D31  P/Correction Station Nbr [No Entry]
D32  P/Correction Station Name [No Entry]
D33  P/Correction Date/Time 12/31/1899 00:00
D34  P/Correction Distance Away 999.9
D36  Benchmark Published Height 999.9
D37  Benchmark Measured Height 999.9
D38  Primary (Actual) Water Level 999.9
D39  Predicted Water Level 999.9
D51  Data Import File      C:\Documents and Settings\Owner\Desktop\aug25pm
D52  Depth Import File
D53  Output File
D60  Points Parser Type     My Data Parser
D61  Points Parser Number   1
D62  Points Parser Import Count 138
D63  Date/Times Imported   True
D65  Depths Parser Type
D66  Depths Parser Number   0
D67  Depths Parser Import Count 0
D70  Ignore Count          0
D71  Written Count         0
D72  Current Count         0
D80  DS Minimum DT         08/25/2004 13:42
D81  DS Maximum DT         08/25/2004 14:50
D82  DS Minimum Latitude   27.792478
D83  DS Maximum Latitude   27.813878
D84  DS Minimum Longitude  -080.456215

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D85 DS Maximum Longitude -080.440973
D90 Personnel Count 3
D91 Notes Count 0
G02 Data Set Title depth run E of ICW FLG 67 to FlG 71
G03 Data Set Date 08/25/2004
G04 Acquisition Starting Time 13:40
G05 Acquisition Ending Time 14:50
G06 Acquisition Time zone EDT
G07 Depth/Tide Units Feet
G08 Map Units Statute
G14 Chart Source / Number 11472
G15 Chart Edition 31
G16 Chart Area East of ICW mkrS FLG 67 south to FLG 71 and back
G19 Data Set Usage Depth Chart
G20 Differential Type DGPS (WAAS)
G22 GPS Manufacturer Garmin
G23 GPS Model 76
G25 DGPS Manufacturer [No Entry]
G26 DGPS Model [No Entry]
G27 GPS Antenna Affixed to/Within GPS
G30 Sonar Manufacturer Humminbird
G31 Sonar Model Matrix 25
G32 Sonar Frequency 200mhz
G37 Transducer Mount Transom Mount
G43 GPS Map Datum WGS 84
G44 GPS Antenna Offset 5 ft
G46 DGPS Station Name [No Entry]
G47 DGPS Distance [No Entry]
G50 Confidence Check YES
G51 Performance Measure Accuracy
G52 Performance Value 18
G53 Satellite Count 8
G60 Wind Speed 0 -2
G61 Wind Direction S
G62 Barometer 30.8
G64 Water Temperature 87
G65 Weather Comments [No Entry]
G68 Boat Speed 2.8
G70 Vessel 20 ft pontoon

(Figure 5)

Note: The Performance Value and Satellite Count can change every second or two during the course of the data collection. The values entered into DepthWiz should be an average of the data observed during survey operations.

Once the survey (s) have been completed they should be entered into CCWEB. The District Chairman and Area Representative should review these reports carefully. If any of the above information was not provided then it should be sent back through the channels to the principal observer.

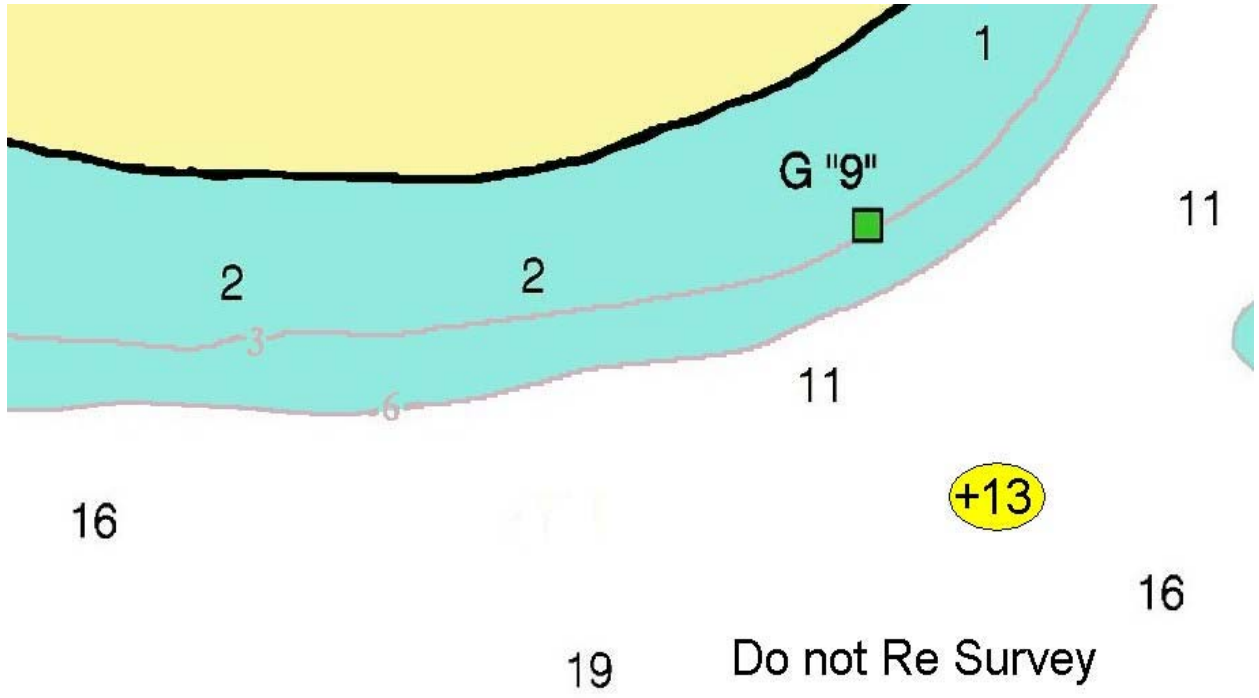


Figure 6

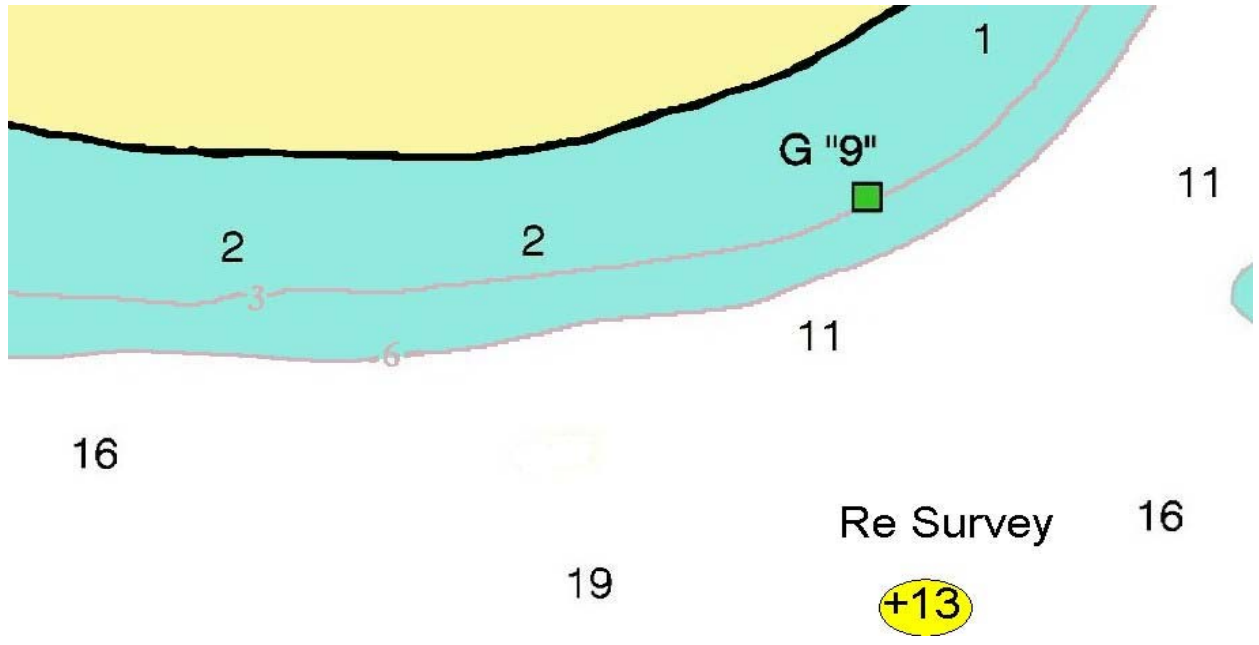


Figure 7

(7)

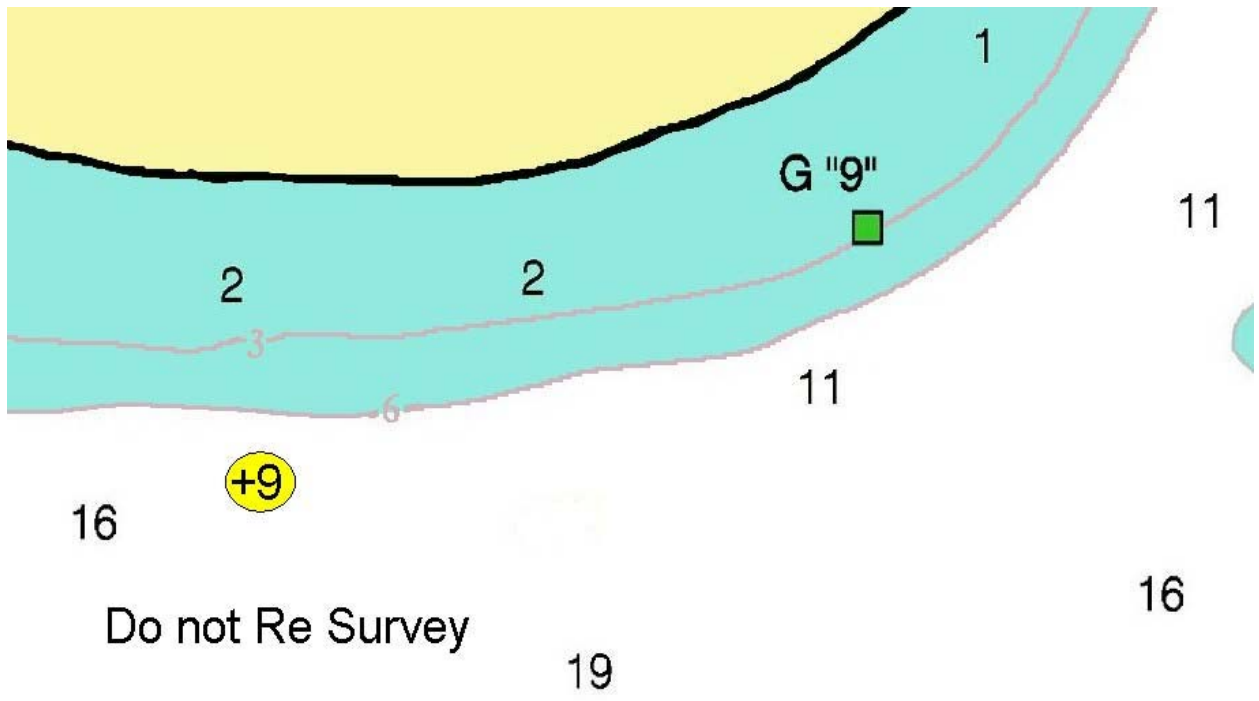


Figure 8

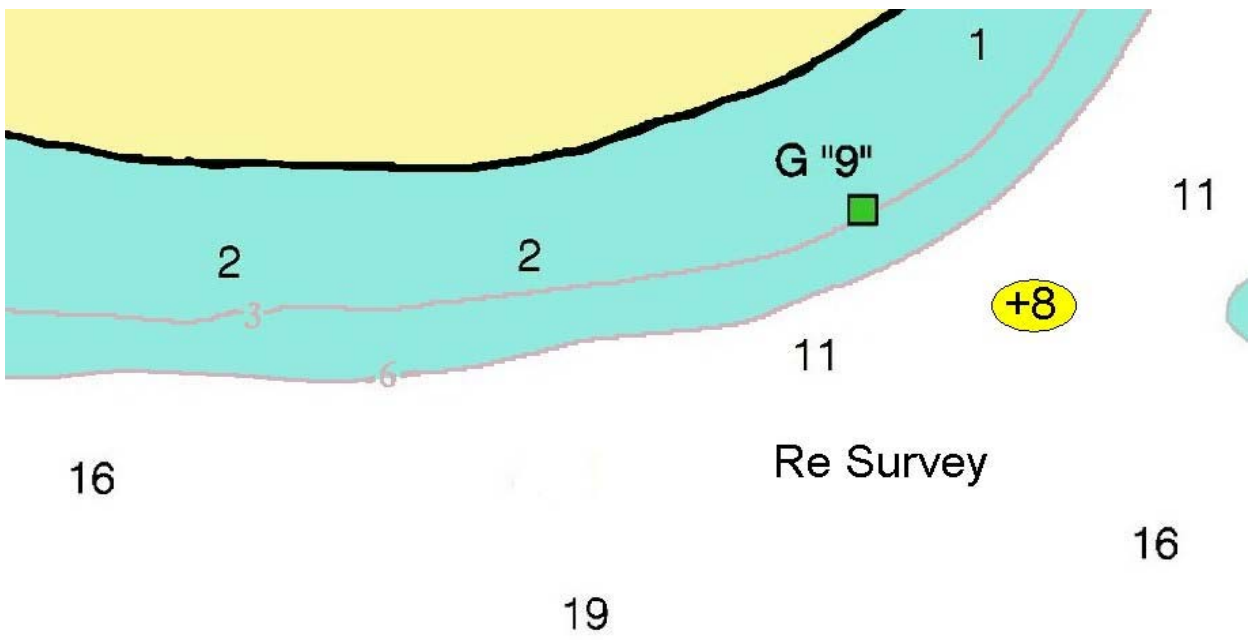


Figure 9

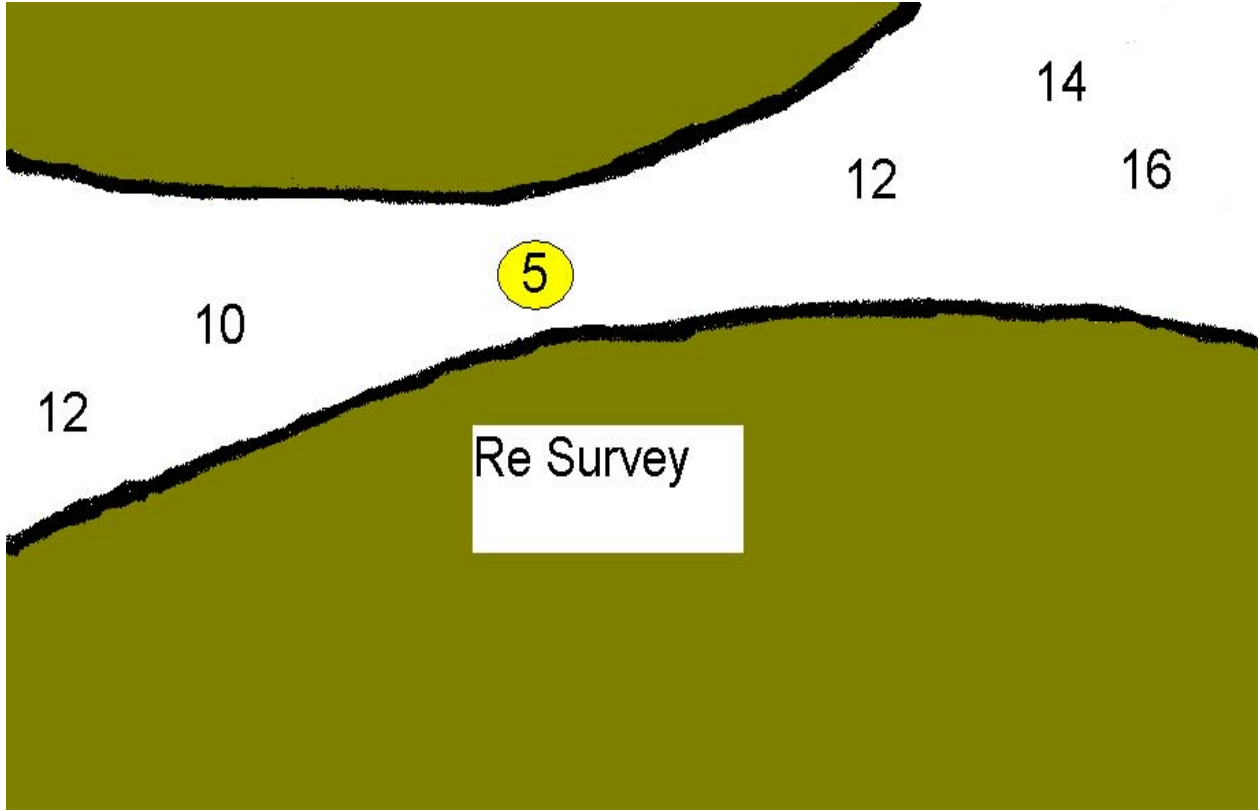


Figure 10

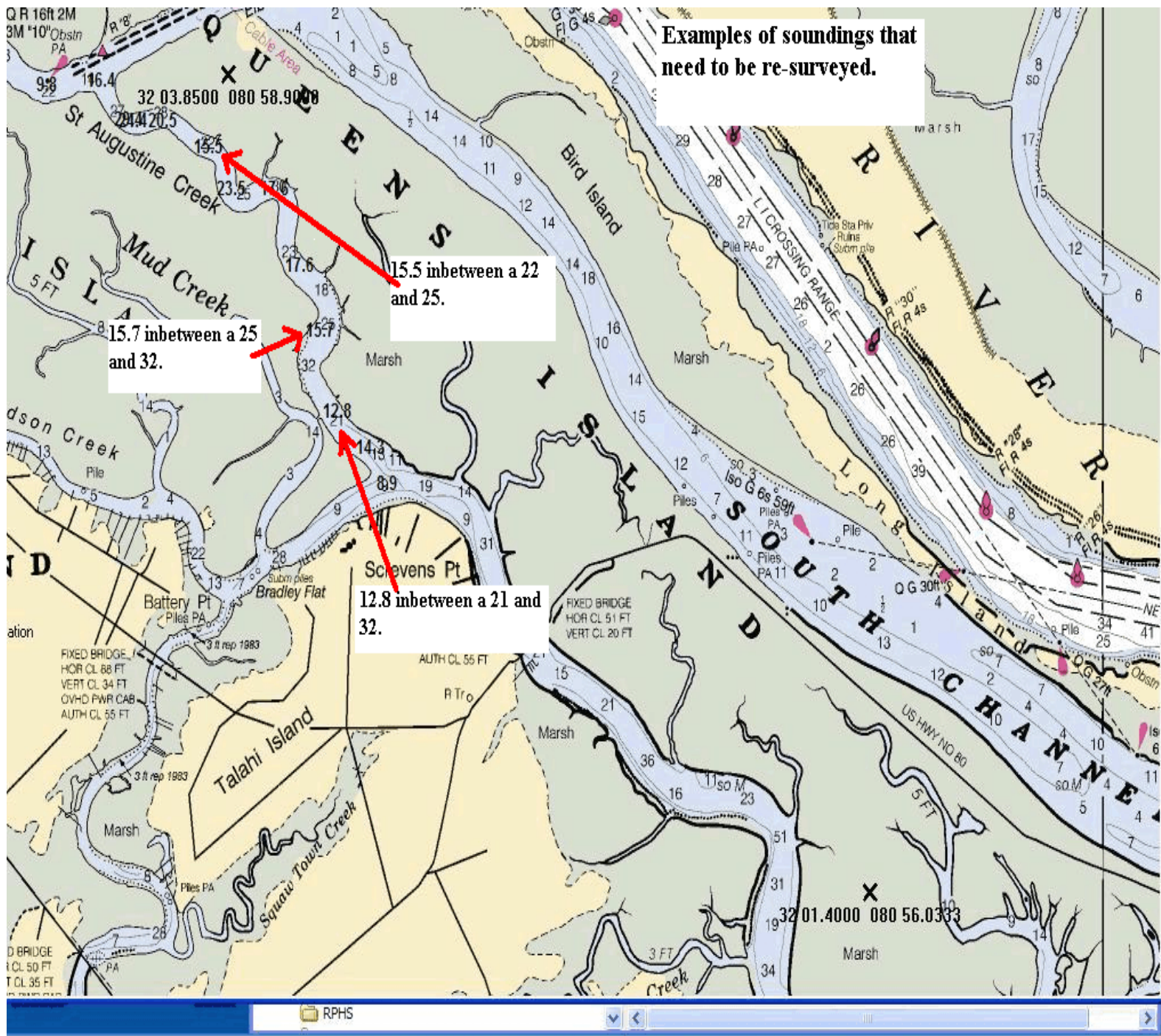


Figure 11

The following will cause the DepthWiz report to be returned for more information:

- Transducer Correction left blank in on the .dww file. (See D11 in the .dww file)
- No tide information in the .dww file. (See D14-D27 in the .dww file)
- Performance Measure and Value left blank in the .dww file. (See G51 and G52 in the .dww file)
- Satellite Count left blank in the .dww file. (See G53 in the .dww file)
- A current **legible** chart section showing the location of the soundings against the charted soundings. Do not erase portions of the chart.
- A report that has a topo map, satellite image, etc uploaded in place of a chart section.
- A chart section that has too many soundings. The report will need to be thinned out.
- A report that has shoal or suspect soundings and a star pattern search has not been completed.
- A report that does not have the correct .dww files for every shoal sounding.
- A report that does not have a descriptive report (file) included in the .dww file or in a .txt file that would need to be uploaded in the Support File link.

If the items listed above are not satisfied then the report will not receive any credit.