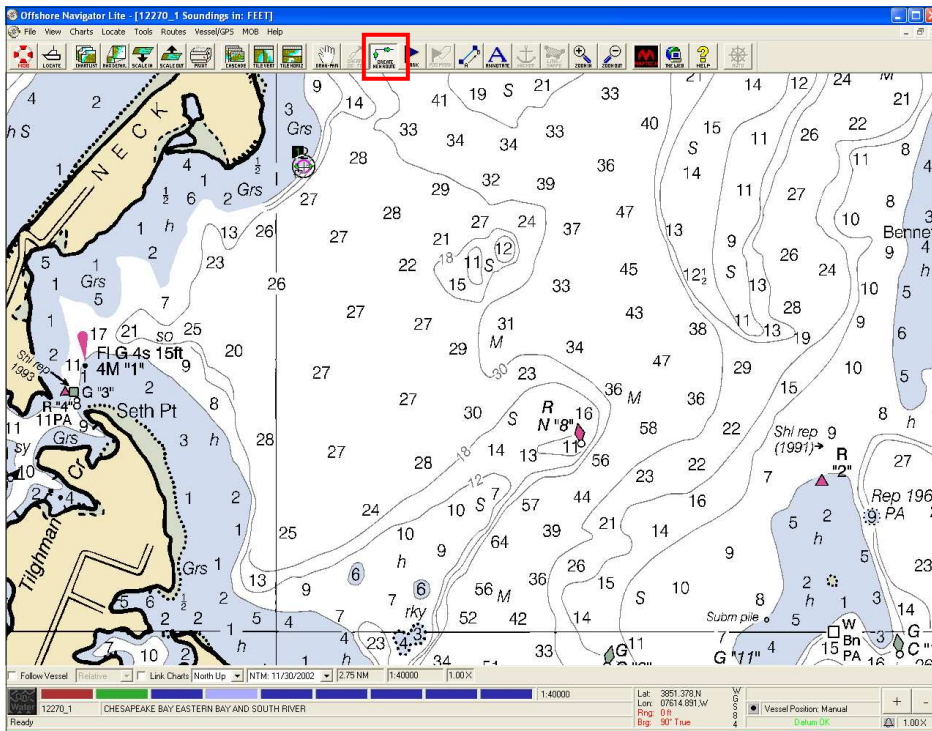


**Anatomy of a Depth Survey**  
**Part II**  
**An Example Survey**

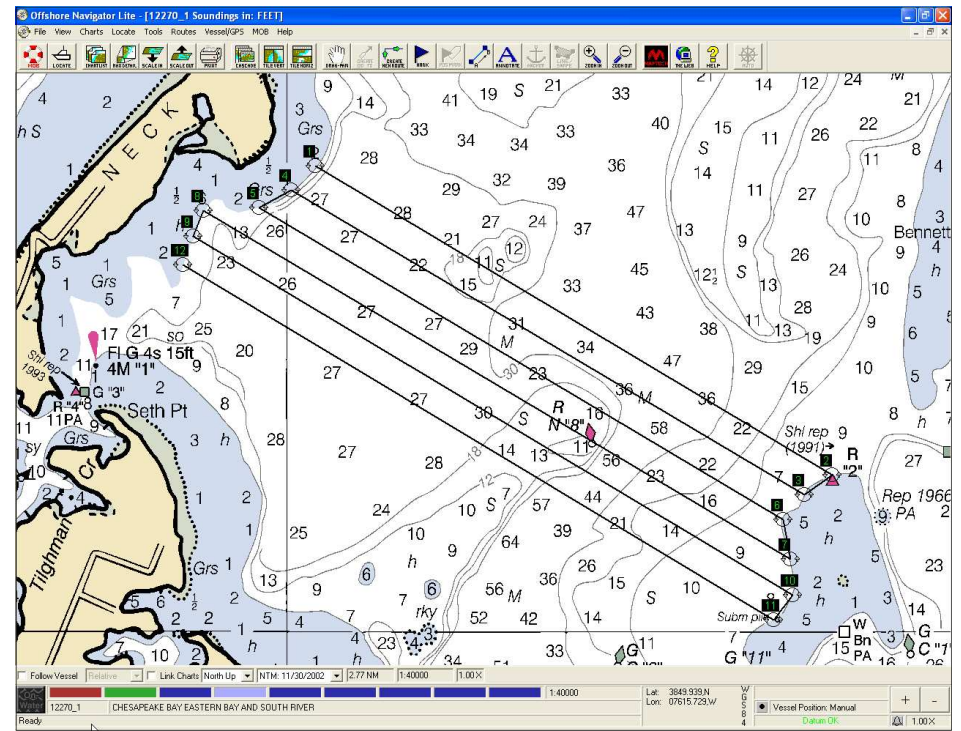
**Tom O'Donnell, AP**  
**Miles River Squadron**

## Example Survey Using tracklog technique with Garmin 178C GPS Sounder

Select area to be surveyed using Maptech Chart Navigator software and free downloadable NOAA raster navigation charts



Create route using Maptech Chart Navigator route tool

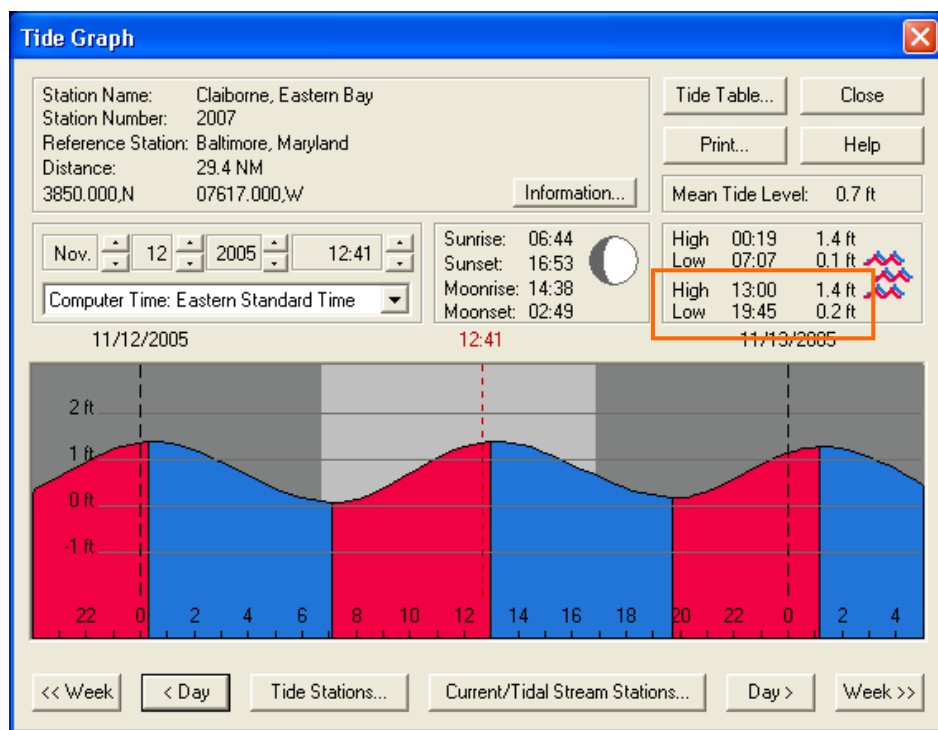


Waypoints are placed at 6ft contours. Parallel legs are roughly 0.1nm apart and preferably no longer than 2—2 1/2nm in length

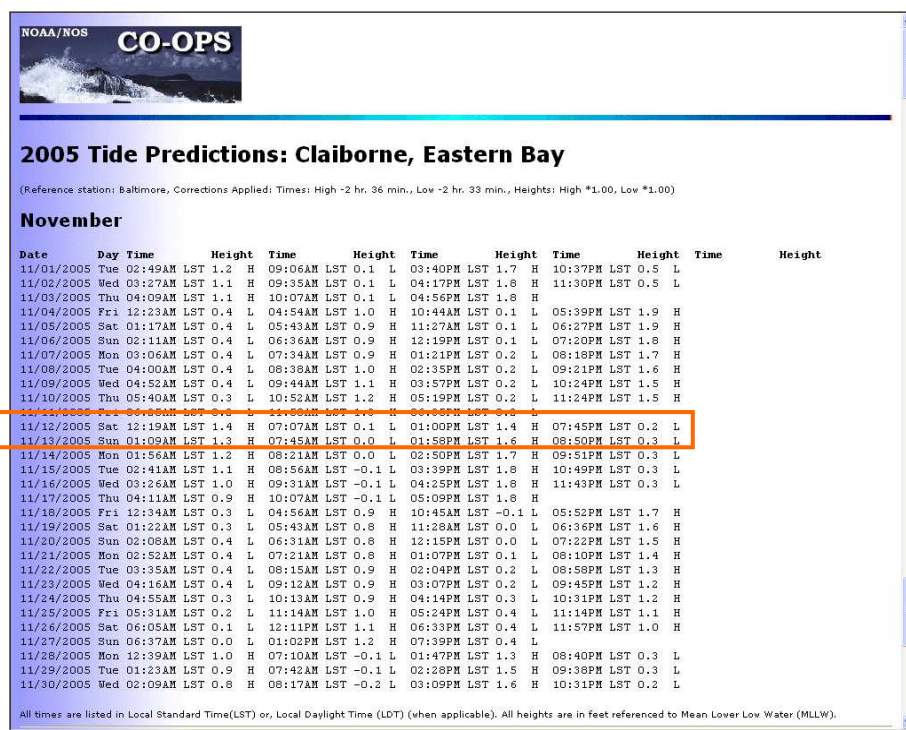
Change seyth Pt names to suit then download route to GPS

Before closing Chart Navigator, use A to B tool to measure distance from center of survey area to nearest Tide Substation (here Claiborne) and nearest Water Level Station (here Annapolis)

Note tide predictions for substation nearest route (here Claiborne). Can be obtained from Maptech or NOAA website. Plan to run route between High and adjacent Low (or between Low and adjacent High). Copy selected tide data (times and heights of tide) to worksheet 2 (discussed later) for later entry into DepthWiz



Tide data from Maptech Tide Stations—identical to NOAA data

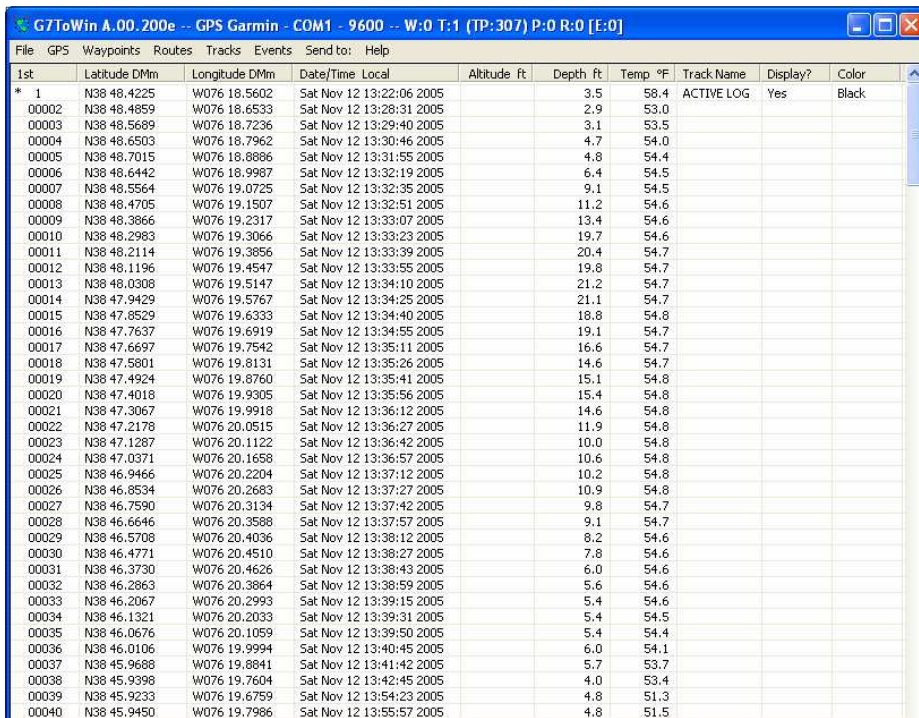


Tide predictions from NOAA NOS Co-ops website

Set GPS tracklog to record every 0.1nm. Clear active tracklog. Perform Confidence Check at dock/lift before leaving. Note time of departure. Upon leaving, tell GPS to "Go To" 1st waypoint. Upon arrival, note time, number of satellites and accuracy. Tell GPS to "Run Route". Run route at about 6kn speed by GPS. Use Highway or Map screen for navigational guidance. At completion of route, "Stop Navigation", note time, number of satellites and accuracy. Upon return to dock/lift, note time. Record data on worksheet 1 (discussed later).

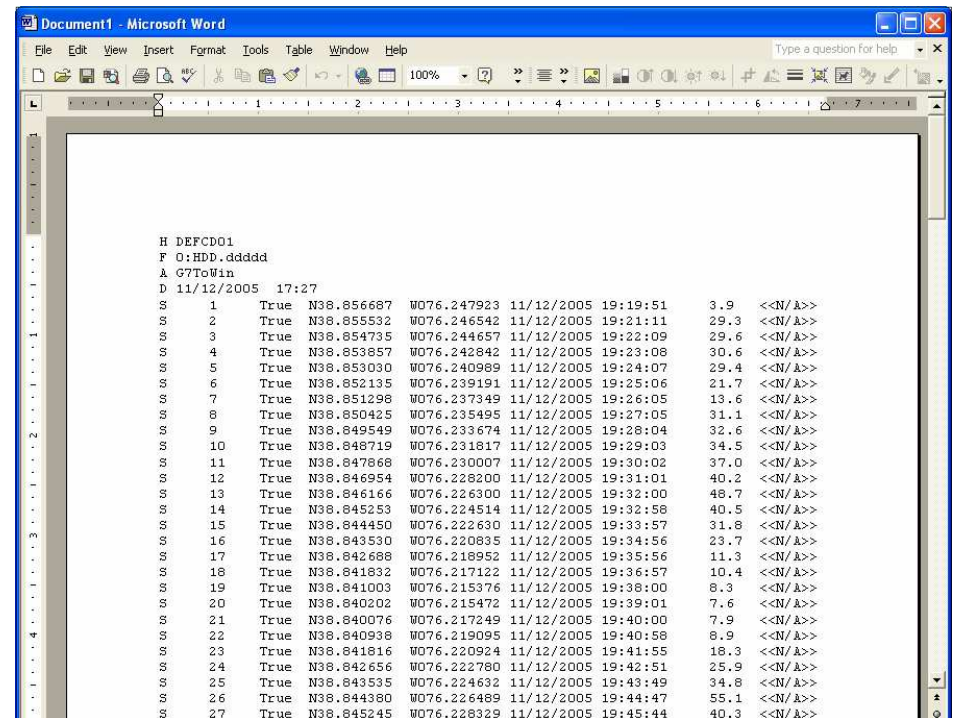
At computer, use G7ToWin to upload **active tracklog** from GPS. **Do not save tracklog before upload!** The active log preserves the time stamp for each individual trackpoint. If you save the active tracklog, the time stamp becomes the time you saved, for all trackpoints.

While in G7ToWin, delete trackpoints for trip out and back, keeping only survey trackpoints. Then save survey tracklog as “DepthWiz Importable File” (.wiz extension)



Ist	Latitude Dmm	Longitude Dmm	Date/Time Local	Altitude ft	Depth ft	Temp °F	Track Name	Display?	Color
* 1	N38 48.4225	W076 18.5602	Sat Nov 12 13:22:06 2005		3.5	58.4	ACTIVE LOG	Yes	Black
00002	N38 48.4859	W076 18.6533	Sat Nov 12 13:28:31 2005		2.9	53.0			
00003	N38 48.5689	W076 18.7236	Sat Nov 12 13:29:40 2005		3.1	53.5			
00004	N38 48.6503	W076 18.7962	Sat Nov 12 13:30:46 2005		4.7	54.0			
00005	N38 48.7015	W076 18.8886	Sat Nov 12 13:31:55 2005		4.8	54.4			
00006	N38 48.6442	W076 18.9987	Sat Nov 12 13:32:19 2005		6.4	54.5			
00007	N38 48.5564	W076 19.0725	Sat Nov 12 13:32:35 2005		9.1	54.5			
00008	N38 48.4705	W076 19.1507	Sat Nov 12 13:32:51 2005		11.2	54.6			
00009	N38 48.3866	W076 19.2317	Sat Nov 12 13:33:07 2005		13.4	54.6			
00010	N38 48.2983	W076 19.3066	Sat Nov 12 13:33:23 2005		19.7	54.6			
00011	N38 48.2114	W076 19.3856	Sat Nov 12 13:33:39 2005		20.4	54.7			
00012	N38 48.1196	W076 19.4547	Sat Nov 12 13:33:55 2005		19.8	54.7			
00013	N38 48.0308	W076 19.5147	Sat Nov 12 13:34:10 2005		21.2	54.7			
00014	N38 47.9429	W076 19.5767	Sat Nov 12 13:34:25 2005		21.1	54.7			
00015	N38 47.8529	W076 19.6333	Sat Nov 12 13:34:40 2005		18.8	54.8			
00016	N38 47.7637	W076 19.6919	Sat Nov 12 13:34:55 2005		19.1	54.7			
00017	N38 47.6697	W076 19.7542	Sat Nov 12 13:35:11 2005		16.6	54.7			
00018	N38 47.5801	W076 19.8131	Sat Nov 12 13:35:26 2005		14.6	54.7			
00019	N38 47.4924	W076 19.8760	Sat Nov 12 13:35:41 2005		15.1	54.8			
00020	N38 47.4018	W076 19.9305	Sat Nov 12 13:35:56 2005		15.4	54.8			
00021	N38 47.3067	W076 19.9918	Sat Nov 12 13:36:12 2005		14.6	54.8			
00022	N38 47.2178	W076 20.0515	Sat Nov 12 13:36:27 2005		11.9	54.8			
00023	N38 47.1287	W076 20.1122	Sat Nov 12 13:36:42 2005		10.0	54.8			
00024	N38 47.0371	W076 20.1658	Sat Nov 12 13:36:57 2005		10.6	54.8			
00025	N38 46.9466	W076 20.2204	Sat Nov 12 13:37:12 2005		10.2	54.8			
00026	N38 46.8534	W076 20.2683	Sat Nov 12 13:37:27 2005		10.9	54.8			
00027	N38 46.7590	W076 20.3134	Sat Nov 12 13:37:42 2005		9.8	54.7			
00028	N38 46.6646	W076 20.3588	Sat Nov 12 13:37:57 2005		9.1	54.7			
00029	N38 46.5708	W076 20.4036	Sat Nov 12 13:38:12 2005		8.2	54.6			
00030	N38 46.4771	W076 20.4510	Sat Nov 12 13:38:27 2005		7.8	54.6			
00031	N38 46.3730	W076 20.4626	Sat Nov 12 13:38:43 2005		6.0	54.6			
00032	N38 46.2863	W076 20.3864	Sat Nov 12 13:38:59 2005		5.6	54.6			
00033	N38 46.2067	W076 20.2993	Sat Nov 12 13:39:15 2005		5.4	54.6			
00034	N38 46.1321	W076 20.2033	Sat Nov 12 13:39:31 2005		5.4	54.5			
00035	N38 46.0676	W076 20.1059	Sat Nov 12 13:39:50 2005		5.4	54.4			
00036	N38 46.0106	W076 19.9994	Sat Nov 12 13:40:45 2005		6.0	54.1			
00037	N38 45.9688	W076 19.8841	Sat Nov 12 13:41:42 2005		5.7	53.7			
00038	N38 45.9399	W076 19.7604	Sat Nov 12 13:42:45 2005		4.0	53.4			
00039	N38 45.9233	W076 19.6759	Sat Nov 12 13:54:23 2005		4.8	51.3			
00040	N38 45.9450	W076 19.7986	Sat Nov 12 13:55:57 2005		4.8	51.5			

Uploaded tracklog (includes trackpoints from trip out and back)



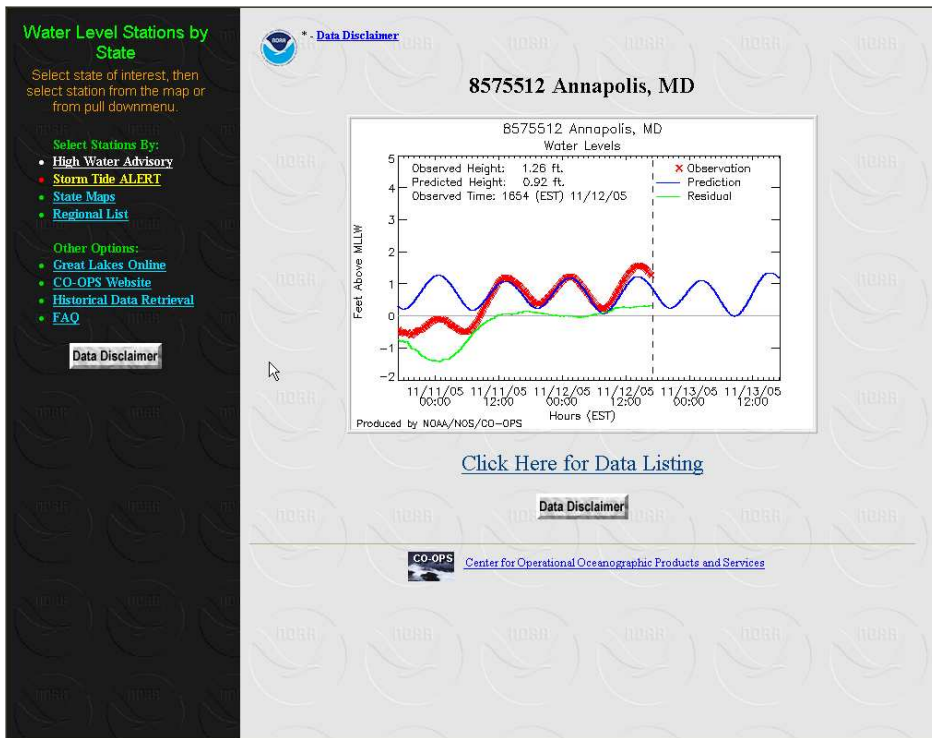
```

H DEFCD01
F O:HDD: dddddd
A G7ToWin
D 11/12/2005 17:27
S 1 True N38.856687 W076.247923 11/12/2005 19:19:51 3.9 <<N/A>>
S 2 True N38.855532 W076.246542 11/12/2005 19:21:11 29.3 <<N/A>>
S 3 True N38.854735 W076.244657 11/12/2005 19:22:09 29.6 <<N/A>>
S 4 True N38.853857 W076.242842 11/12/2005 19:23:08 30.6 <<N/A>>
S 5 True N38.853030 W076.240989 11/12/2005 19:24:07 29.4 <<N/A>>
S 6 True N38.852135 W076.239191 11/12/2005 19:25:06 21.7 <<N/A>>
S 7 True N38.851298 W076.237349 11/12/2005 19:26:05 13.6 <<N/A>>
S 8 True N38.850425 W076.235495 11/12/2005 19:27:05 31.1 <<N/A>>
S 9 True N38.849549 W076.233674 11/12/2005 19:28:04 32.6 <<N/A>>
S 10 True N38.848719 W076.231817 11/12/2005 19:29:03 34.5 <<N/A>>
S 11 True N38.847868 W076.230007 11/12/2005 19:30:02 37.0 <<N/A>>
S 12 True N38.846954 W076.228200 11/12/2005 19:31:01 40.2 <<N/A>>
S 13 True N38.846166 W076.226300 11/12/2005 19:32:00 48.7 <<N/A>>
S 14 True N38.845253 W076.224514 11/12/2005 19:32:58 40.5 <<N/A>>
S 15 True N38.844450 W076.222630 11/12/2005 19:33:57 31.8 <<N/A>>
S 16 True N38.843530 W076.220835 11/12/2005 19:34:56 23.7 <<N/A>>
S 17 True N38.842688 W076.218952 11/12/2005 19:35:56 11.3 <<N/A>>
S 18 True N38.841832 W076.217122 11/12/2005 19:36:57 10.4 <<N/A>>
S 19 True N38.841003 W076.215376 11/12/2005 19:38:00 8.3 <<N/A>>
S 20 True N38.840202 W076.215472 11/12/2005 19:39:01 7.6 <<N/A>>
S 21 True N38.840076 W076.217249 11/12/2005 19:40:00 7.9 <<N/A>>
S 22 True N38.840938 W076.219095 11/12/2005 19:40:58 8.9 <<N/A>>
S 23 True N38.841816 W076.220924 11/12/2005 19:41:55 18.3 <<N/A>>
S 24 True N38.842656 W076.222780 11/12/2005 19:42:51 25.9 <<N/A>>
S 25 True N38.843535 W076.224632 11/12/2005 19:43:49 34.8 <<N/A>>
S 26 True N38.844380 W076.226489 11/12/2005 19:44:47 55.1 <<N/A>>
S 27 True N38.845245 W076.228329 11/12/2005 19:45:44 40.3 <<N/A>>

```

Survey log saved as “.wiz” (modified Word format)

Go online and gather data on Tide Prediction **correction** data from nearest Water Level Station (here Annapolis, MD) Select time roughly midway during time of survey.



Comparison of Predicted and Actual (Observed) water levels in graphical form

**8575512 Annapolis, MD**

11/12/2005	11:36:00	EST	0.80	1.11	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	11:42:00	EST	0.83	1.12	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	11:48:00	EST	0.85	1.15	0.30	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	11:54:00	EST	0.88	1.18	0.30	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:00:00	EST	0.91	1.19	0.28	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:06:00	EST	0.93	1.23	0.30	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:12:00	EST	0.95	1.24	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:18:00	EST	0.98	1.26	0.28	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:24:00	EST	1.00	1.29	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:30:00	EST	1.02	1.31	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:36:00	EST	1.05	1.33	0.28	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:42:00	EST	1.07	1.35	0.28	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:48:00	EST	1.09	1.36	0.27	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	12:54:00	EST	1.11	1.38	0.27	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:00:00	EST	1.13	1.40	0.27	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:06:00	EST	1.14	1.43	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:12:00	EST	1.16	1.44	0.28	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:18:00	EST	1.17	1.46	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:24:00	EST	1.19	1.48	0.29	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:30:00	EST	1.20	1.50	0.30	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:36:00	EST	1.21	1.51	0.30	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:42:00	EST	1.22	1.53	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:48:00	EST	1.23	1.54	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	13:54:00	EST	1.24	1.55	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:00:00	EST	1.24	1.55	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:06:00	EST	1.25	1.55	0.30	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:12:00	EST	1.25	1.56	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:18:00	EST	1.25	1.57	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:24:00	EST	1.25	1.56	0.31	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:30:00	EST	1.25	1.57	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:36:00	EST	1.25	1.57	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:42:00	EST	1.24	1.57	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:48:00	EST	1.24	1.56	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	14:54:00	EST	1.23	1.55	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:00:00	EST	1.22	1.55	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:06:00	EST	1.21	1.54	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:12:00	EST	1.20	1.53	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:18:00	EST	1.19	1.52	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:24:00	EST	1.18	1.51	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:30:00	EST	1.17	1.50	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:36:00	EST	1.15	1.49	0.34	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:42:00	EST	1.14	1.47	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:48:00	EST	1.13	1.46	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	15:54:00	EST	1.11	1.44	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:00:00	EST	1.10	1.42	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:06:00	EST	1.08	1.40	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:12:00	EST	1.06	1.38	0.32	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:18:00	EST	1.04	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:24:00	EST	1.02	1.35	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:30:00	EST	1.00	1.33	0.33	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:36:00	EST	0.98	1.32	0.34	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:42:00	EST	0.96	1.30	0.34	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:48:00	EST	0.94	1.28	0.34	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	16:54:00	EST	0.92	1.26	0.34	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:00:00	EST	0.89	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:06:00	EST	0.87	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:12:00	EST	0.85	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:18:00	EST	0.82	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:24:00	EST	0.80	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:30:00	EST	0.77	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9
11/12/2005	17:36:00	EST	0.75	-99.99	-99.99	-999	-999	-999	-999	9	-99	9	-999	9

Comparison of Predicted and Actual (Observed) water levels in tabular form

Copy time and water level values (predicted and actual) to worksheet 2 (also discussed later).

Weather data (wind direction and speed, barometric pressure and water temp) can be obtained from numerous sources. One source is a weather buoy (from the National Data Buoy Center) if near the survey area. Select a time roughly midway through the survey. You can “adjust” wind speed for local conditions. Record on worksheet 2.

MM	DD	TIME	WDIR	WSPD	GST	WVHT	DPD	APD	MWD	PRES	PTDY	ATMP	WTMP	DEWP	SAL	VIS	TIDE
(EST)		(EST)	kts	kts	ft	sec	sec	in	in	in	in	°F	°F	°F		mi	ft
11	12	3:00 pm	SSE	15	16	-	-	-	-	30.28	-0.04	56.5	57.2	36.1	-	-	-
11	12	2:00 pm	SSE	14	16	-	-	-	-	30.29	-0.06	55.8	57.0	35.1	-	-	-
11	12	1:00 pm	SSE	11	11	-	-	-	-	30.29	-0.06	55.0	56.8	32.7	-	-	-
11	12	12:00 pm	S	8	9	-	-	-	-	30.32	-0.02	54.5	56.7	33.1	-	-	-
11	12	11:00 am	SSW	9	10	-	-	-	-	30.34	+0.00	53.1	56.8	-	-	-	-
11	12	10:00 am	SW	4	5	-	-	-	-	30.35	+0.03	50.0	56.5	35.2	-	-	-
11	12	9:00 am	WSW	2	3	-	-	-	-	30.34	+0.04	47.7	56.7	34.3	-	-	-
11	12	8:00 am	WSW	5	5	-	-	-	-	30.34	+0.05	46.4	56.3	-	-	-	-
11	12	7:00 am	SW	4	5	-	-	-	-	30.32	+0.05	46.6	56.5	38.5	-	-	-
11	12	6:00 am	W	2	3	-	-	-	-	30.29	+0.04	45.7	56.1	37.2	-	-	-
11	12	5:00 am	W	3	3	-	-	-	-	30.28	+0.03	46.2	56.1	36.5	-	-	-
11	12	4:00 am	W	5	5	-	-	-	-	30.27	+0.03	46.0	56.3	36.1	-	-	-
11	12	3:00 am	WNNW	7	8	-	-	-	-	30.26	+0.01	46.8	56.7	37.0	-	-	-
11	12	2:00 am	WNNW	8	8	-	-	-	-	30.25	+0.03	47.1	57.2	-	-	-	-
11	12	1:00 am	WNNW	6	6	-	-	-	-	30.24	+0.02	48.0	57.0	33.8	-	-	-
11	12	12:00 am	WNNW	7	8	-	-	-	-	30.24	+0.04	48.7	57.2	32.9	-	-	-
11	11	11:00 pm	WNNW	6	6	-	-	-	-	30.23	+0.03	49.1	57.0	36.7	-	-	-
11	11	10:00 pm	WNNW	7	8	-	-	-	-	30.22	+0.03	49.1	56.8	32.5	-	-	-
11	11	9:00 pm	W	6	7	-	-	-	-	30.20	+0.02	50.4	57.0	34.2	-	-	-
11	11	8:00 pm	WNNW	6	7	-	-	-	-	30.20	+0.04	50.9	57.2	33.4	-	-	-
11	11	7:00 pm	W	5	5	-	-	-	-	30.19	+0.05	52.0	57.2	29.7	-	-	-
11	11	6:00 pm	WNNW	4	5	-	-	-	-	30.18	+0.04	52.3	57.2	29.1	-	-	-
11	11	5:00 pm	W	7	9	-	-	-	-	30.16	+0.03	52.7	56.8	28.8	-	-	-

[Description of Measurements](#)

Links which are specific to this station are listed below:

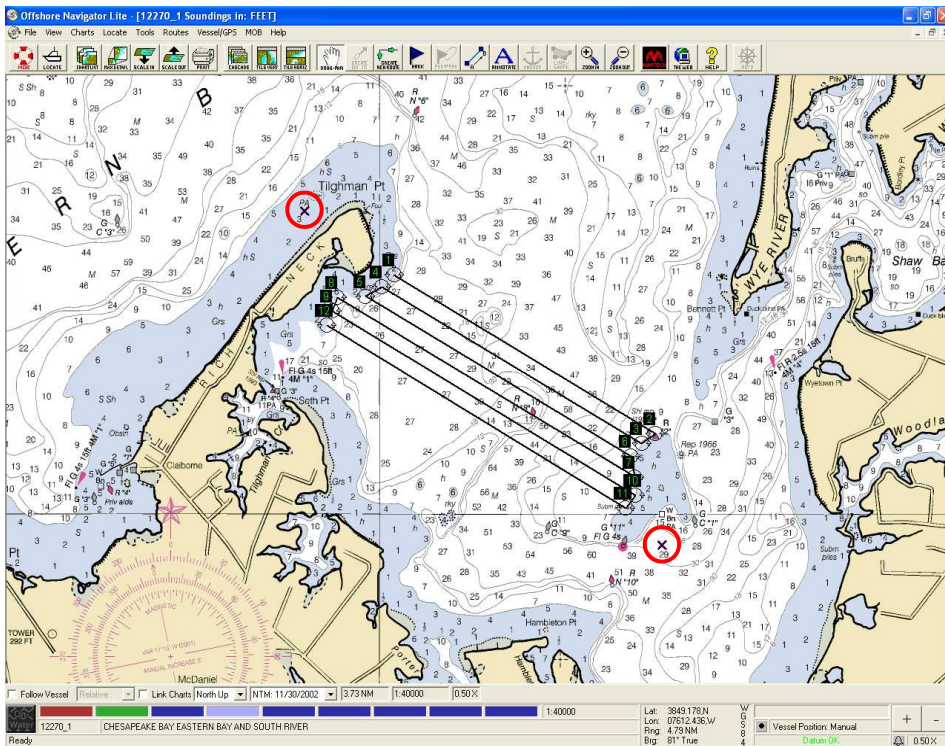
[Real Time Data](#) in tabular form for the last forty-five days.

[Historical Data & Climatic Summaries](#) for quality-controlled data for the current month, previous

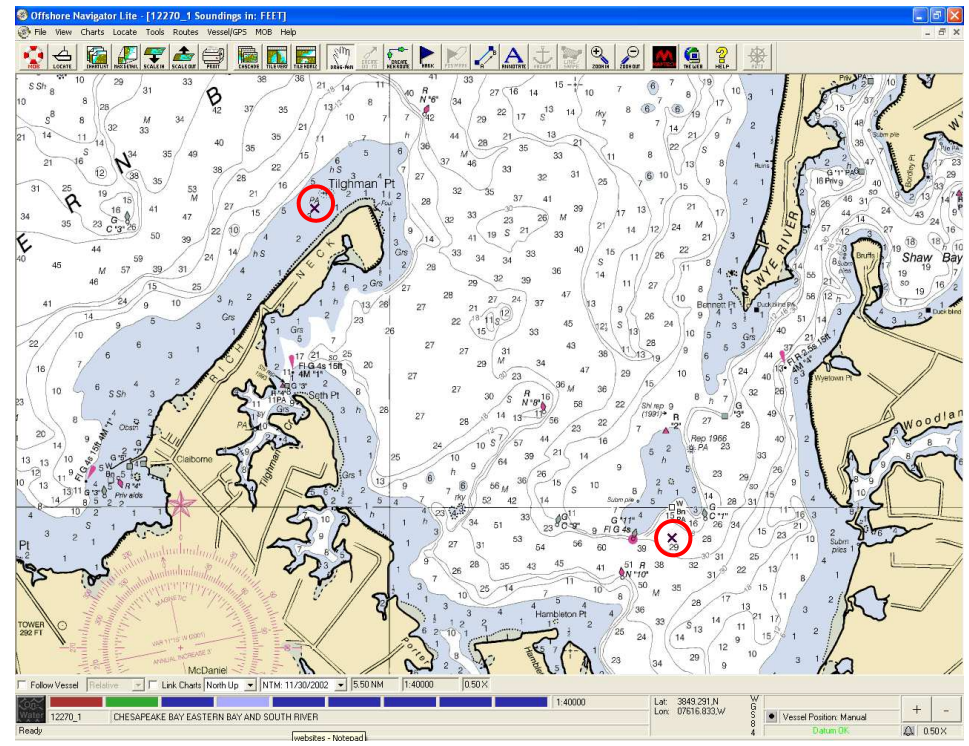
Thomas Point (Annapolis) weather data buoy

## Create the blank chart to use in DepthWiz.

Re-open Chart Navigator. With the route you created still visible, use the **Mark** tool to create marks at diagonal corners (here left upper and right lower) to be used for calibration in DepthWiz. **Record the coordinates of both marks on worksheet 2.**



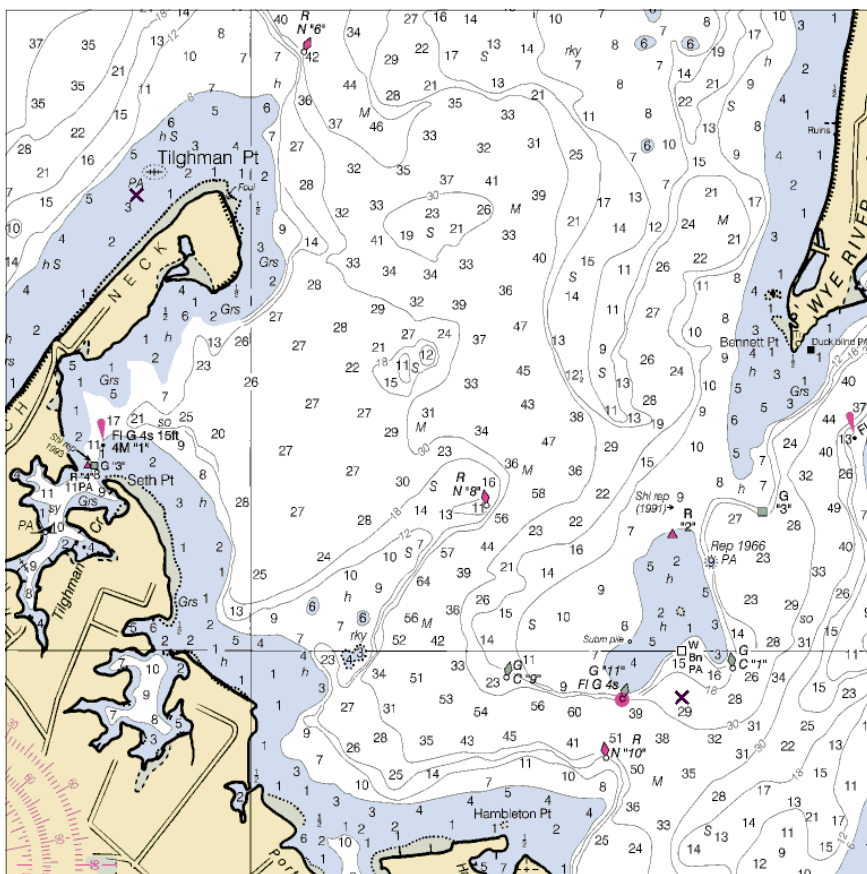
Then mouseover the route. When the cursor becomes the 4 way arrow, right click, select Route Properties, then uncheck the box next to Display Route. Then click OK.



The route is no longer visible. Only the two marks remain.

Now do a “screen capture” (in any graphic format you prefer). We use software called **Snagit** by TechSmith. You can use the **Print Screen** key on your keyboard. Hold down the **Alt** key to capture only the active window.

Open and paste into any image editing software, like **Paint Shop Pro** or **Adobe Photoshop** .(We use Macromedia’s **Fireworks**). If you have Microsoft Office you can use **Photo Editor**. You can make do with Microsoft **Paint**, but it’s not as easy to use. Now crop and resize the image. You must resize to fit an 8.5 x 11 printed page in portrait view. We generally create a square image, 768 x 768 pixels at 96ppi that prints 8 x 8in. (At 72ppi this would be 576 x 576) This must be saved as a .jpg file



The chart jpg, with its calibration points, is now ready to be entered into DepthWiz when needed



## Worksheets

**Have both filled out and ready before opening DepthWiz**

**Depth Survey Worksheet 1**

Date 11/12/05 Survey Eastern Bay 21

**We have 2 batteries**

At lift  
 Set battery to charge 1  
 Turn on GPS / Enable WAAS  
 Confidence Check yes  
 Erase track log  
 Note time of departure 13:26

48.423	76.559
.424	.559

**L, Lo coordinates from Static Test**

14:19	7	12
-------	---	----

**GPS coordinates prior to departure**

16:24	7	9
-------	---	---

Back at lift  
 Note time of return 16:48

**Depth Survey Worksheet 2**

Date 11/12/05 Survey Eastern Bay 21

Report # 11776

Transducer correction 1.6  
 Confidence Check yes

Time departure 13:26

14:19	accuracy	7	# satellites	12
16:24	accuracy	7	# satellites	9

Time return 16:48

Survey start 14:20 end 16:24

Tide Predictions  
 Station # 2007 Name Claiborne Distance 2.4  
 Before 13:00 Hi 1.4  
 After 19:45 Lo 0.2

Tide Prediction Correction  
 Annapolis (8575512)  
 Distance 14.1 Time 15:00 Predicted 1.22  
 Actual 1.55

Weather - Annapolis  
 Wind speed 12  
 Direction SSE  
 Barometer 30.28  
 Water temp 57.2

Chart calibration - regular  

LU	L	<u>3851.748</u>	RL	L	<u>3849.827</u>
	Lo	<u>7615.555</u>		Lo	<u>7612.889</u>

**We now do Zoom In Chart view as well**

Chart calibration - zoom in  

LU	L	<u>3851.540</u>	RL	L	<u>3850.206</u>
	Lo	<u>7615.162</u>		Lo	<u>7612.975</u>

Water miles 30.8 Water Hours 3.4  
 Prep Hours 1.0

**From tracklog**

Worksheet completed on boat

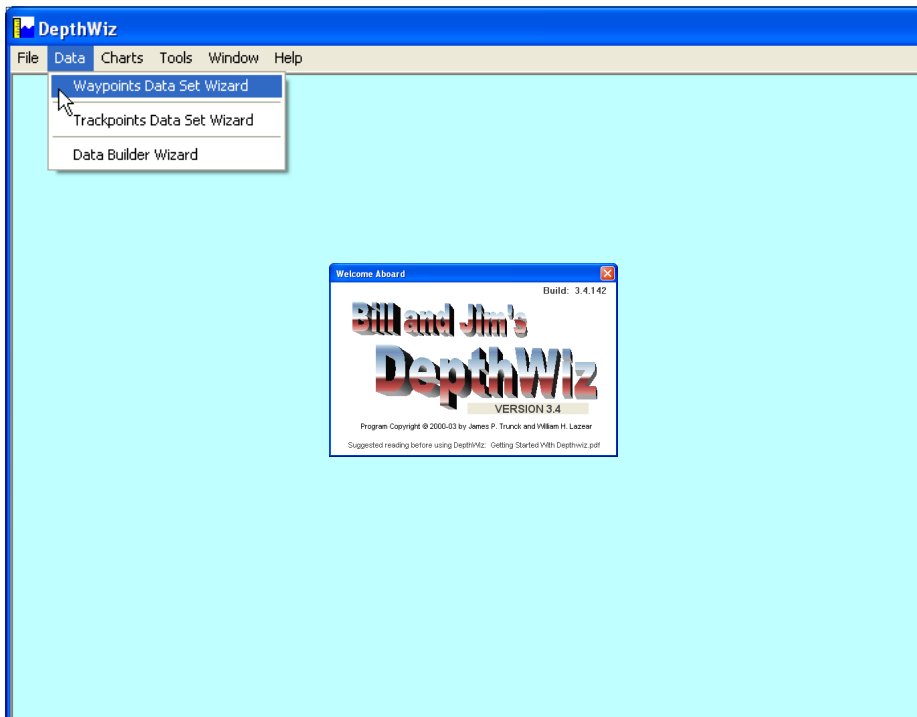
Worksheet completed at computer before opening DepthWiz

## DepthWiz

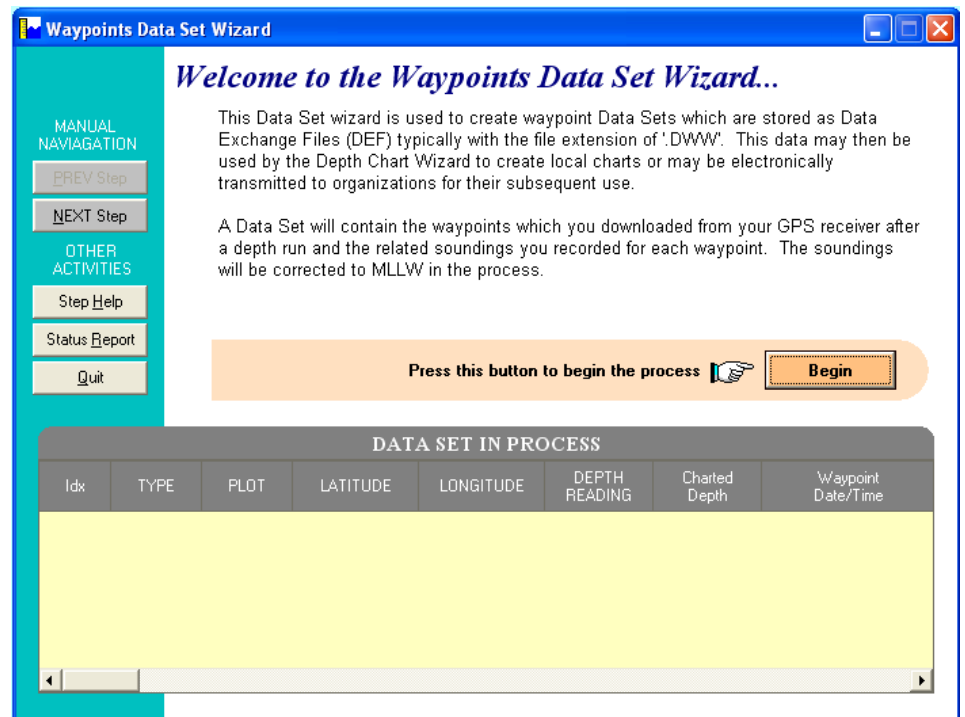
Software to convert your recorded soundings to MLLW and then print them on a chart



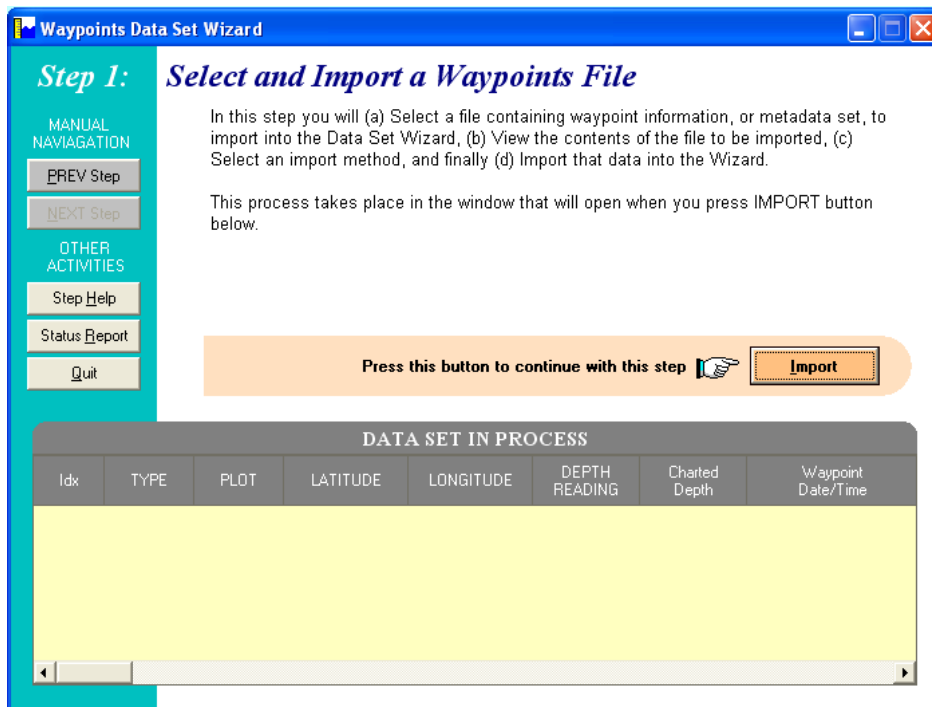
Click on the icon to open



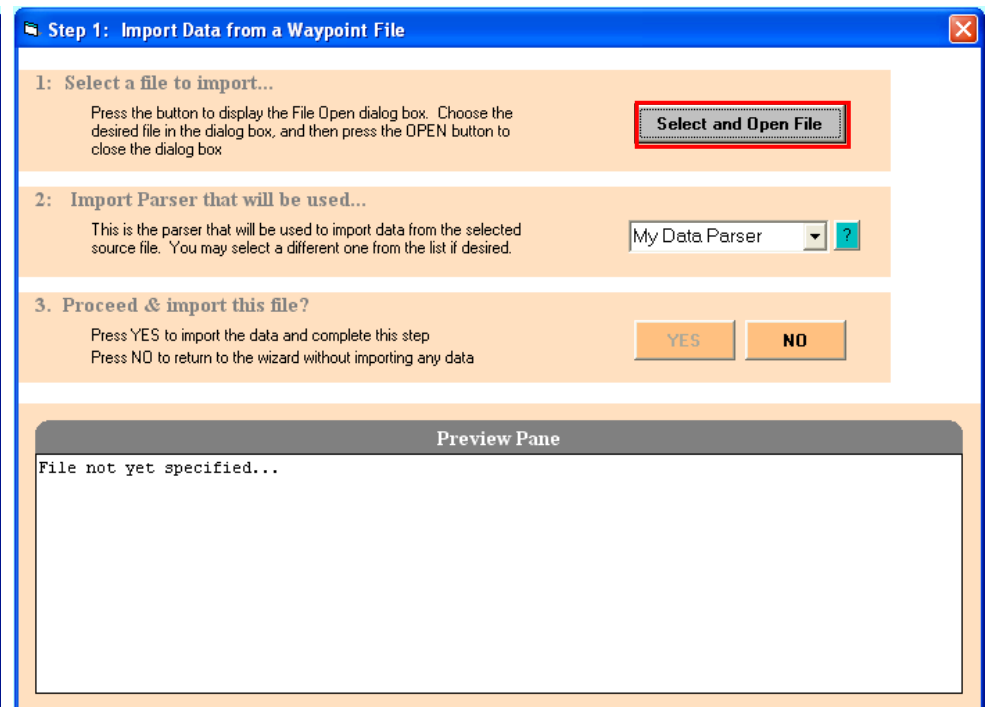
1. Click anywhere to make Bill and Jim's introductory label disappear then click **Data > Waypoints Data Set Wizard** even though we're using trackpoints. (the Trackpoint Wizard is for something entirely different, the "Static Test", used to establish a position such as your dock/lift to be used in the "confidence check")



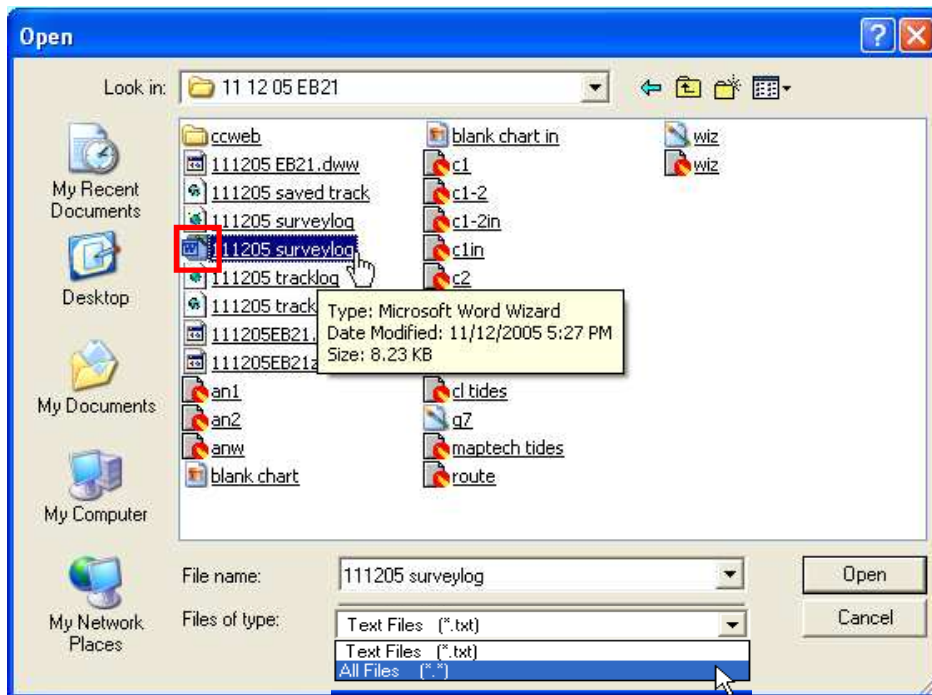
2. In the beginning you'll want to read the explanation. Later you'll just "follow the pointing hand" and click where it points, "Begin"



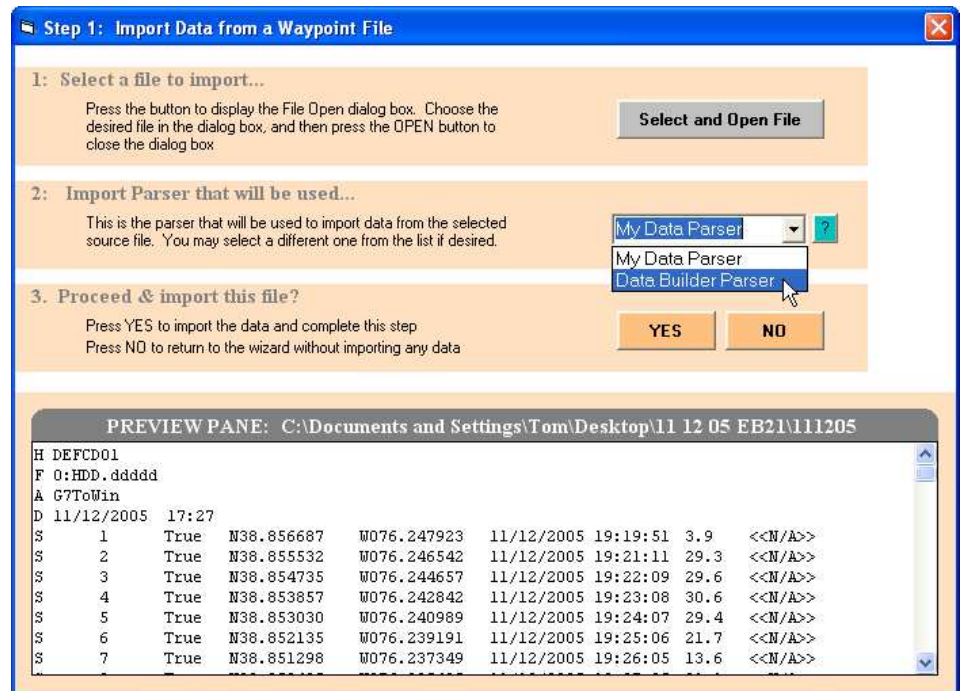
3. Again, while learning, read the explanation. Later, just click “Import”



4. No pointing hand, but click on “Select and Open File”



5. Find your folder, click the dropdown arrow next to “Text Files” and select “All Files” then click on the file that has the little “W” icon. (.wiz is a Microsoft Word Wizard format). Click “Open”



6. The .wiz doc does not require you to construct a “parser”. Click the dropdown arrow next to “My Data Parser” and select “Data Builder Parser” (the default parser that reads .wiz) then click “Yes”

**Waypoints Data Set Wizard**

### Step 2: Review and Validate the Imported Data

MANUAL NAVIGATION

PREV Step

**NEXT Step**

OTHER ACTIVITIES


Step Help

Status Report

Quit

Review the data in the Data Set In Process grid pane. Columns with their header in upper case have been analyzed to determine if they are complete and reasonable. These columns may be edited and changed. Invalid entries in these columns will cause the row to be highlighted in RED and the Plot column to become unchecked. Failure to correct such rows will cause them to be excluded in the data set. None of the other columns may be edited; data is entered and/or provided elsewhere in the wizard for those columns.

**All rows appear OK at the present time...**

When ready, press this button to go to the next step  **Continue**

Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:21

7. With the .wiz / Data Builder Parser combination, you rarely get invalid entries. Just click “Continue” (where the hand points)

**Waypoints Data Set Wizard**

### Step 3: Enter Depth Readings from a Soundings File

MANUAL NAVIGATION

PREV Step

**NEXT Step**

OTHER ACTIVITIES


Step Help

Status Report

Quit

If you have used the Soundings Recorder, or other tool such as a word processor or spreadsheet program, to create a file of soundings, continue with this step to select that file and merge the soundings data into the data set. If the waypoints import parser imported the depth soundings, proceed directly to the next step.

If you desire to manually enter the soundings into the Depth Reading column of the Data Set In Process Pane below, do so at this time. Thereafter, press the Continue button to proceed to the next step.

Press this button to continue with this step  **Input**

Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:21

8. Since we’re using trackpoints, the depths are already included. Just click the gray “Next Step” button (here’s the one time you don’t follow the pointer hand).


Of course, if you used the manual waypoint technique, you’d have to enter the soundings. You can use the DWiz “Soundings Recorder”. Just click **Tools > Soundings Recorder**.

**Waypoints Data Set Wizard**

### Step 4: Create General Information Data

In this step you enter General information about this Data Set. If the data is to be submitted to an organization, they may use the General information in their evaluation or validation of the Data Set, so it is important to provide all of the items requested. If you do not intend to submit the data to an organization, it makes a good record of your work.

The data is arranged under various tabs, each covering a different aspect of run when the soundings or trackpoint data was collected.

Press this button to continue with this step  **Input**

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:21

9. There is some info you might use in every report, like equipment. Click **File > Options > Equipment** and enter it there. DWiz will then do the entering every time you create a new report. Here just click "Input".

**Step 4: General Information**

Click on a section name below to display the data input fields...

**Basic (Required) Information**

- Select the Data Set TYPE (REQUIRED):**  
Data Set Usage:
- Provide a title for the data set (REQUIRED):**  
Data Set Title:
- Provide the date and times associated with capturing the data:**  
Date of Survey Work:   
Time of First Waypoint:  Last Waypoint:   
Your Time Zone:
- Select the units of measure that you are utilizing:**  
Depth Units:  Map Units:

<<< PREVIOUS Section    **NEXT Section >>>**

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step **Continue...**

10. Select "Depth Chart" then give your survey report a name. Enter the date, survey start and end times from your worksheet (ignore the fact it says waypoints, just use the first and last trackpoint times) and your time zone. Enter Feet for depths, and Statue for map units. Click "Next Section" not "Continue".

Step 4: General Information

Click on a section name below to display the data input fields...

**Chart Information**

5. This Data Set contains locations on the following Chart, and its usage is described below...

Chart Source/Nbr: NOAA NOS 12270

Chart Edition: 33

Chart Area: Chesapeake Bay Eastern Bay

26

<<< PREVIOUS Section    NEXT Section >>>

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step

Continue...

11. Enter data about the chart area you're working on. You can get the latest edition info from CCWeb. Click "Next Section"

Step 4: General Information

Click on a section name below to display the data input fields...

**Equipment Employed - Part 1**

6. Indicate the type of Differential GPS employed:

Select a choice: DGPS (WAAS)

NOTE: If DGPS (USCG) is selected then Questions 8 and 14 on the subsequent panels MUST be completed.

7. Describe the GPS equipment employed:

Manufacturer: Garmin

Model: 178C GPS Sounder

Firmware: 2.40

Antenna Type: Externally cabled to GPS

<<< PREVIOUS Section    NEXT Section >>>

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step

Continue...

12. Here's info about your GPS. If you've entered the equipment info in Options, you can skip this page. DWiz will fill it all out for you. Click "Next Section"

Step 4: General Information

Click on a section name below to display the data input fields...

Basic Information

Chart Information

Equipment Part 1

**Equipment Part 2**

Equipment Readings

GPS Performance

Conditions During Data Acquisition

Other Information

### Equipment Employed - Part 2

**8. If the Differential unit was a separate component, provide this information:**

Manufacturer:

Model:

**9. Describe the SONAR equipment employed:**

Manufacturer:

Model:

Frequency Used:

**10. Select how the Sonar TRANSDUCER was mounted on the vessel:**

Select a choice:

<<< PREVIOUS Section    **NEXT Section >>>**

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step    Continue...

13. Here's the info about your sounder. If entered in Options, you can skip this page also. DWiz will fill it out. Click "Next Section"

Step 4: General Information

Click on a section name below to display the data input fields...

Basic Information

Chart Information

Equipment Part 1

Equipment Part 2

**Equipment Readings**

GPS Performance

Conditions During Data Acquisition

Other Information

### Equipment Readings

**11. What was the average vessel speed while taking Readings:**

Average Speed during data acquisition:

**12. Provide the Map Datum setting used by your GPS receiver:**

GPS Map Datum Employed:

**13. Provide this relationship between your GPS antenna and Transducer:**

GPS Antenna to Transducer Distance:

**14. If you used a USCG DGPS corrected GPS unit, supply the respective information below:**

Station Name:

Distance Away:

<<< PREVIOUS Section    **NEXT Section >>>**

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step    Continue...

14. Fill in your average survey speed, the chart datum, and your horizontal transducer offset", We, like most nowadays, use a WAAS enabled GPS, so leave the DGPS entries blank . Click "Next Section"



Step 4: General Information

Click on a section name below to display the data input fields...

- Basic Information
- Chart Information
- Equipment Part 1
- Equipment Part 2
- Equipment Readings
- GPS Performance**
- Conditions During Data Acquisition
- Other Information

### GPS Performance

**15. Was a Confidence Check performed on your GPS Equipment before or after the survey run?**

Confidence Check Performed?

**16. Supply the information below concerning your GPS performance.**

Select Performance Measure:

Performance Measure's Value:

Number of Satellites:

<<< PREVIOUS Section    **NEXT Section >>>**

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step    Continue...

15. Enter the GPS performance info (accuracy and number of satellites) from your worksheet. Click "Next Section"

Step 4: General Information

Click on a section name below to display the data input fields...

- Basic Information
- Chart Information
- Equipment Part 1
- Equipment Part 2
- Equipment Readings
- GPS Performance
- Conditions During Data Acquisition**
- Other Information

### Conditions During Data Acquisition

**17. Describe the weather and sea conditions during data acquisition:**

Wind Speed:

Wind Direction:

Barometer:

Water Temperature:

**18. Describe any other pertinent weather or sea conditions:**

<<< PREVIOUS Section    **NEXT Section >>>**

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step    Continue...

16. Enter the weather info from your worksheet. Here we adjusted the wind speed down from that recorded at the Annapolis weather buoy. Click "Next Section"

**Step 4: General Information**

Click on a section name below to display the data input fields...

- Basic Information
- Chart Information
- Equipment Part 1
- Equipment Part 2
- Equipment Readings
- GPS Performance
- Conditions During Data Acquisition
- Other Information**

**Other Information**

19. Provide a description of the vessel used, its name, and owner:

21 Boston Whaler Center Console 31

20. Miscellaneous tracking data.

Land Commuting Miles: 0

Water Acquisition Miles: 30.8

Project Hours (NOT Man Hrs): 4.4

<<< PREVIOUS Section      NEXT Section >>>

When you have answered ALL 20 QUESTIONS in the sections, press the CONTINUE button to close this window and proceed to the next step

**Continue...**

17. Enter a brief description of your boat. Water Miles and Project Hours also come from the worksheet. (Add water time to prep time to get project time). You've finished the last section. Now click "Continue"

**Waypoints Data Set Wizard**

**Step 5: What's Next...**

MANUAL NAVIGATION

PREV Step

NEXT Step

OTHER ACTIVITIES


Step Help

Status Report

Quit

All basic data for a Data Set has now been provided. It is time to supply correction information for that data. Correction information is needed to adjust the depth readings to MLLW charted depth readings. The correction information will be entered in the next four steps. Also, the status of your data set rows to this point is indicated below.

**All rows appear OK at the present time...**

Press this button to continue to the next step  **Continue**

**DATA SET IN PROCESS**

Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:22
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:23
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:24
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:25


18. Again, all this will usually be correct. Click "Continue"

**Waypoints Data Set Wizard**

### Step 6: UTC Time Correction to Local Time

If your waypoints were recorded and imported as UTC time, the times must be adjusted to the time zone in which they were taken. For instance, to correct time to EDT, the time correction factor would be -4, CDT would be -5, etc.

Press the ADJUST button to continue with this step and enter a time zone offset.

Press this button to continue with this step 

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:21

19. G7ToWin usually sends the .wiz file for trackpoints out in UTC. Click “Adjust”

**Step 6: Adjust GPS Times**

**About your data...**

Min / Max D/S Times	Trip Start / End Times
11/12/2005 19:19	11/12/2005 14:20
11/12/2005 21:23	11/12/2005 16:24

**Enter Time Zone Offset...**

Select the desired offset to UTC (Greenwich Mean Time, a/k/a Zulu Time), if necessary. Some GPS downloaders automatically convert the time field of readings to your local time zone, in which case the Offset would be left at zero. Data from other downloaders will need a correction applied to the time fields.

Use the up and down arrow buttons to adjust the time zone offset. All U.S. locations are minus offsets to UTC time...

OFFSET:

W150	W135	W120	W105	W90	W75	W60
<b>HAWAII</b> -10	<b>ALASKA</b> -9	<b>PACIFIC</b> PST -8 PDT -7	<b>MOUNTAIN</b> MST -7 MDT -6	<b>CENTRAL</b> CST -6 CDT -5	<b>EASTERN</b> EST -5 EDT -4	<b>ATLANTIC</b> -4

NOTE: Not all States or areas use daylight savings time in the summer.

When you have made the desired offset adjustment, press the CONTINUE button to close this window and proceed to the next step

**Continue**


20. We're Eastern time zone and this example survey was done 11/12/05 so EST...therefore -5. Min/Max D/S times are from the .wiz. Trip start/end times are from our worksheet. Notice they are 5 hours different (a double check) Click “Continue”

**Waypoints Data Set Wizard**

### Step 7: Transducer Depth Correction

The sonar equipment used to take your soundings had to include a transducer which was mounted below the water line at some point on a vessel. Most depth sounding equipment is set to report the depth to the bottom from the location of the submerged transducer, and not from the bottom to the water surface.

A correction factor is usually required. This factor is the difference between the Measured Depth at a specific location and the Depth Reading while underway taken at the specific (same) location. This correction factor is entered in this step.

Press this button to continue with this step 


Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:22
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:23
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:24
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:25

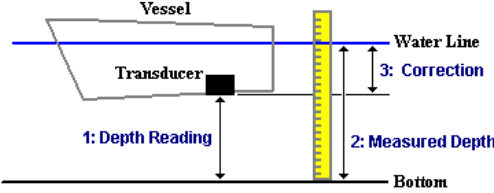
21. Now we have to correct for our survey speed “squat”. Click “Continue”

### Step 7: Transducer Depth Correction

**Enter Correction for Transducer**

Unless the sonar equipment used to take the depth reading has been corrected precisely to the surface of the water when underway, a correction must be entered.

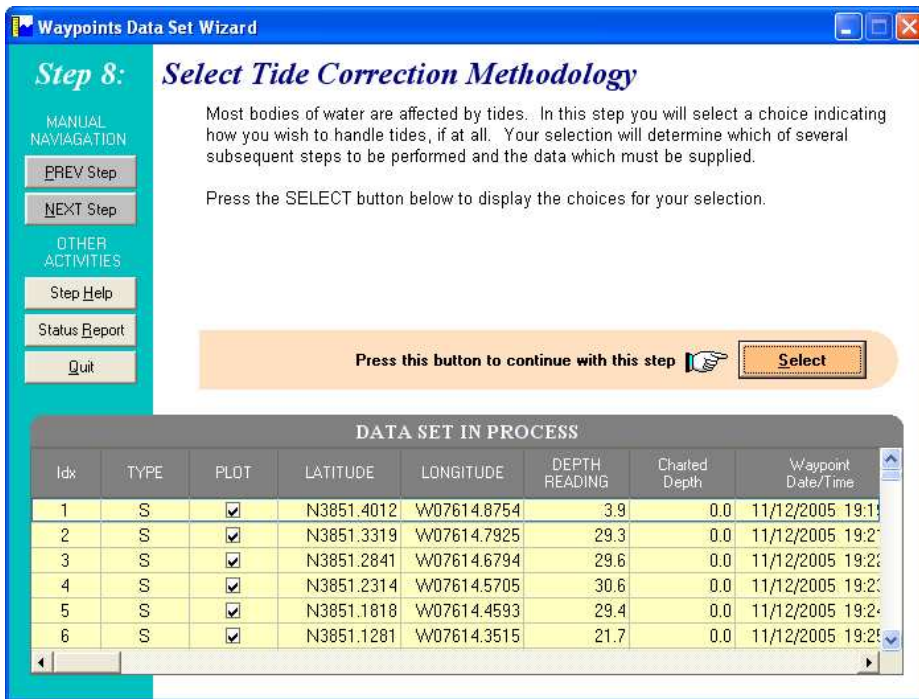
 Correction (in Feet to 1/10th decimal place):



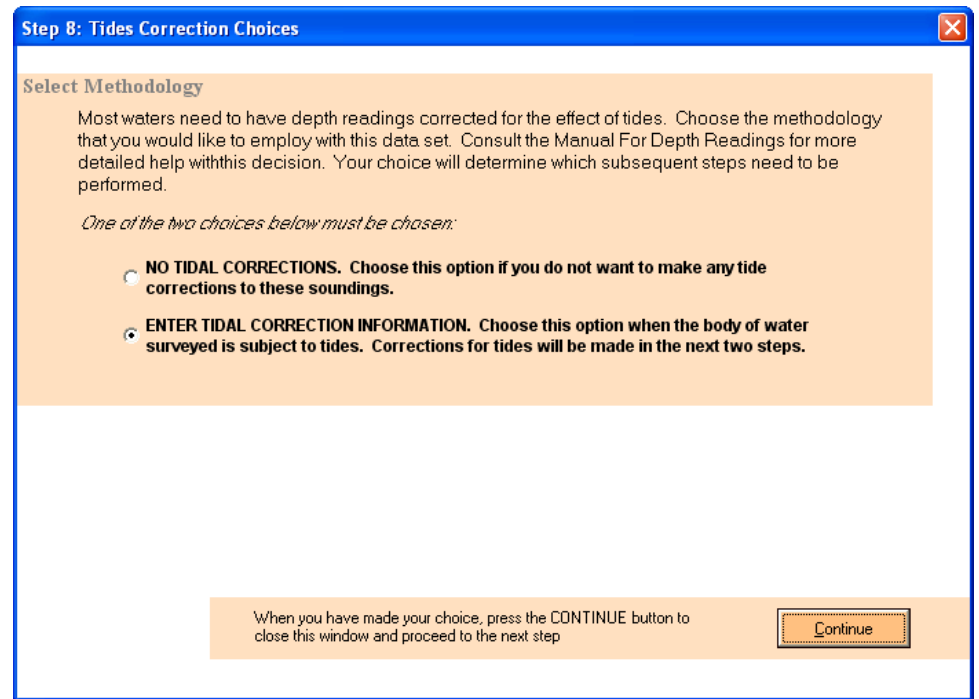
The Correction is the Measured Depth minus the Depth Reading, stated in feet to one decimal place as a positive number.

When you have entered the correction adjustment, press the CONTINUE button to close this window and proceed to the next step

22. This value is from our pre-survey measurement. Usually only needs to be measured once for a specific boat. Enter it and click “Continue”



23. Click “Select”



24. If you are in tidal waters, accept the default choice and just click “Continue”

**Waypoints Data Set Wizard**


### Step 9: Correction for Tides

**MANUAL NAVIGATION**  
 PREV Step  
 NEXT Step

**OTHER ACTIVITIES**  
 Step Help  
 Status Report  
 Quit

In this step you will enter the date, time, and height of the tide just before or during your survey, and the same information for the next tide thereafter. You may use Actual tide data or Predicted tide data. Both are available from the NOAA internet site (see Manual for Depth Readings for address), and Predicted tide data is available from other sources as well.

Press the INPUT button to open this step's window for data entry.

Press this button to continue with this step 

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:26
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:26
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:26
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:26

25. Again, while learning, read the explanation. Later, just click "Input"

**Step 9: Corrections For Tides**

#### 1: Minimum and Maximum Date/Time Range in Your Data Set

This step is relative to the times of your depth readings, which are stated to the right. They have been adjusted for the GPS time offset you specified to yield local times:

Minimum:	11/12/2005 14:19
Maximum:	11/12/2005 16:23

#### 2: Enter the Actual or Predicted Tide Information

Reference Station Number:

Reference Station Name:

Source of Tidal Data:

First Tide (preceding or during run):  
 Date/Time:  Height:

Next Tide After Above Tide:  
 Date/Time:  Height:

Distance from Reference point to Survey Area:  Miles

NOTE: Enter heights in feet to one decimal place; times in 24 hour format.

When you have entered the tide information, press the CONTINUE button to close this window and proceed to the next step

26. Enter, from your worksheet, the substation data for tide heights/ times that precede and follow your survey as well as the distance from your survey to the substation. Then click "Continue"

**Waypoints Data Set Wizard**

### Step 10: Prediction Correction

MANUAL NAVIGATION

PREV Step

NEXT Step

OTHER ACTIVITIES


Step Help

Status Report

Quit

In this step a tidal Prediction Correction method is chosen. This information is used to correct predictions to more accurate values. You may elect not to apply a prediction correction, base it on benchmark data, or base it upon Reference Station data in this step. The appropriate information is then entered to compute a Prediction Correction.

Press the INPUT button to open this step's window for data entry.

Press this button to continue with this step  **Input**

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	0.0	11/12/2005 19:19
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	0.0	11/12/2005 19:20
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	0.0	11/12/2005 19:20
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	0.0	11/12/2005 19:20
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	0.0	11/12/2005 19:20
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	0.0	11/12/2005 19:20

27. Again, while learning, read the explanation. Later, just click "Input"

**Step 10: Prediction Correction**

#### 1: Minimum and Maximum Date/Time Range in Your Data Set

This measurement should have been taken around the times of your depth readings, which are stated to the right. They have been adjusted for the time offset you specified to yield local times:

Minimum:	11/12/2005	14:19
Maximum:	11/12/2005	16:23

#### 2. Choose Prediction Correction Methodology

Select Option:  Skip a Prediction Correction  #1 - Benchmark  #2 - Reference Station

#### 3. Enter Reference Station data below (ALL fields are required):

Reference Station Number:

Reference Station Location:

Date/Time of Water Levels:

Distance from Station to survey area:  Miles

Primary Water Level:

Predicted Water Level:

When you have entered the required information, press the CONTINUE button to close this window and proceed to the next step

**Continue**

28. If you choose #2 (as we do), enter the water level station data for a time during your survey. Also the distance away. (both from your worksheet) Then click "Continue"

If you use the Tidal Benchmark method, #1, there are windows for you to enter the pertinent data

**Waypoints Data Set Wizard**


### Step 11: Review Corrected Soundings

MANUAL NAVIGATION  
 PREVIOUS Step  
 NEXT Step  
 OTHER ACTIVITIES  
 Step Help  
 Status Report  
 Quit

All work on the data has been completed, and the Charted (MLLW) Depths have been calculated! The Wizard has scanned the rows for correctness again; the results are presented below. Rows highlighted in red, if any, will be excluded when the data is saved, unless they are corrected before proceeding further.

Only two optional steps follow before saving the data to a DEF file.

**All rows appear OK at the present time...**

Press this button to continue with this step  **Continue**

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	3.8	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	29.2	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	29.5	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	30.5	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	29.3	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	21.6	11/12/2005 19:21

29. Again, while learning, read the explanation. Later, just click "Continue"


**Waypoints Data Set Wizard**

### Step 12: Contributing Personnel

MANUAL NAVIGATION  
 PREVIOUS Step  
 NEXT Step  
 OTHER ACTIVITIES  
 Step Help  
 Status Report  
 Quit

If you wish to record the personnel that contributed to the acquisition of this Data Set, you may do so in this step. This step is optional. Personnel entries are entered and shown in the Personnel Step window.

Press the YES button below to display the Personnel window.  
 Press the NO button below to skip displaying the Personnel window.

Press one of the two buttons to continue  **YES** **NO**

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	3.8	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	29.2	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	29.5	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	30.5	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	29.3	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	21.6	11/12/2005 19:21

30. This is really optional since you'll have to re-enter this data into CCWeb later. If you choose to do so, click "Yes"



**Step 12: Personnel Information**

**Instructions**

If you wish to record the participants that contributed to the creation of this Data Set, enter their information in the Personnel (grid) Pane below. YOU MUST PRESS THE ENTER KEY TO ADD THE NEW ROW TO THE LIST. New entries are entered into the top row. Existing entries are edited in their respective row. To delete a row, move the mouse cursor to the left edge of the grid positioned on the row desired, and then press the delete key.

Enter Personnel Here...

Personnel Pane				
Last Name	First Name	F.T.P.	Duties	Perce
		<input type="checkbox"/>		
O'Donnell	Gail	<input type="checkbox"/>	Helmsman	5
O'Donnell	Tom	<input type="checkbox"/>	Navigator	5

Record: 1 of 2

When you have completed entering personnel, press the CONTINUE button to close this window and proceed to the next step

Continue...

31. Make sure you press your **Enter** key after each individual. When you're finished, click "Continue"

**Waypoints Data Set Wizard**

**Step 13: Notes and Comments**

MANUAL NAVIGATION

PREV Step

NEXT Step

OTHER ACTIVITIES

Step Help

Status Report

Quit

If you wish to record one or more notes, or comments, about the acquisition of this Data Set, you may do so in this step. This step is optional. Note entries are entered and shown in the Notes Step window.

Press the YES button below to display the Notes window.  
Press the NO button below to skip displaying the Notes window.

Press one of the two buttons to continue **YES** **NO**

DATA SET IN PROCESS							
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	3.8	11/12/2005 19:1
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	29.2	11/12/2005 19:2
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	29.5	11/12/2005 19:2
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	30.5	11/12/2005 19:2
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	29.3	11/12/2005 19:2
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	21.6	11/12/2005 19:2

32. If you wish to include any notes or comments, click "Yes". We generally select "No". If you do add a note or comment, you must click on "Enter" to save it. Bill Lazear's latest DepthWiz manual— includes trial (simulated) run

**Waypoints Data Set Wizard**

**Step 14: Save Data Set into DEF File**

MANUAL NAVIGATION

PREV Step

NEXT Step

OTHER ACTIVITIES


Step Help

Status Report

Quit

It is time to save the information into a Depth Wiz text file on your PC. Press the SAVE button to open the DEF Writer window. The selection of a file name, it's location, and the creation of a DEF file containing the data is done in the DEF Writer window.

NOTE: You may repeat this step and save the data under different file names if you wish. Also, do not exit this Data Set Wizard without performing this step. All work to this point has been done in memory. Exiting the Wizard clears that memory and you would have to start over again.

Press this button to continue with this step  **Save**

**DATA SET IN PROCESS**

Idx	TYPE	PLOT	LATITUDE	LONGITUDE	DEPTH READING	Charted Depth	Waypoint Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	3.8	11/12/2005 19:11
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	29.2	11/12/2005 19:21
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	29.5	11/12/2005 19:21
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	30.5	11/12/2005 19:21
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	29.3	11/12/2005 19:21
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	21.6	11/12/2005 19:21

33. This DEF (data exchange format) file will be your .dww file, which you will upload, via CCWeb to NOAA. Click “Save”

**DEF Writer: Create Waypoints Data File**


**1: Save the Data in a Disk File...**

To save your data, press the SAVE DATA button. Data is saved into a disk file. The Save File dialog box will open for you to assign a file name for the data.

You may specify any file name you like for the file; however DepthWiz will assign a unique file extension to the file for identification purposes. Do not change the default file extension. The file extension in the name of a file indicates which wizard created the file:

- .dww - Created by DepthWiz Waypoints DataSet Wizard
- .dwt - Created by DepthWiz Trackpoints DataSet Wizard
- .dwd - Created by DepthWiz Depth Chart Wizard
- .dws - Created by DepthWiz Static Test Chart Wizard

After you enter a file name and press the SAVE button in the dialog box, you will be prompted to continue. Answering YES will cause the file to be created with the data saved in it.

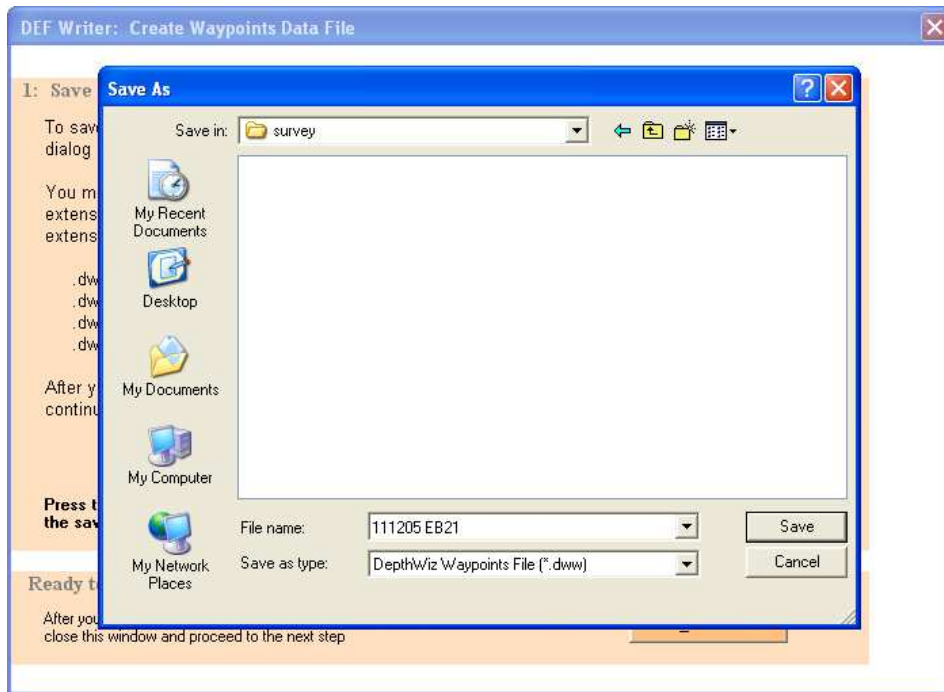
Press this button to open the File Save dialog box and perform the save process...  **Save Data**

**Ready to Continue...**

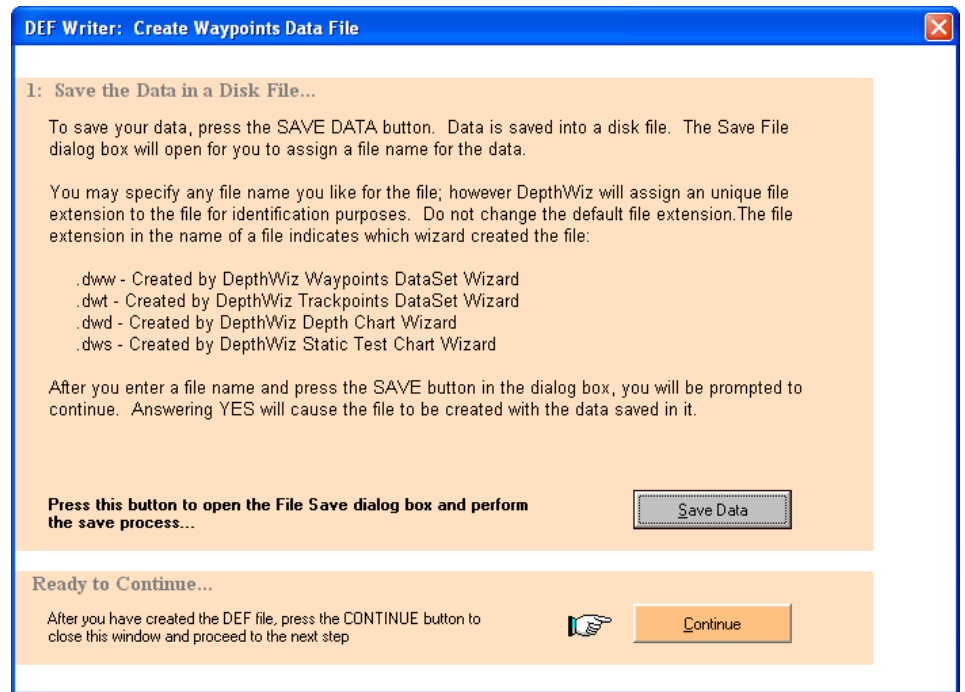
After you have created the DEF file, press the CONTINUE button to close this window and proceed to the next step

**Continue**

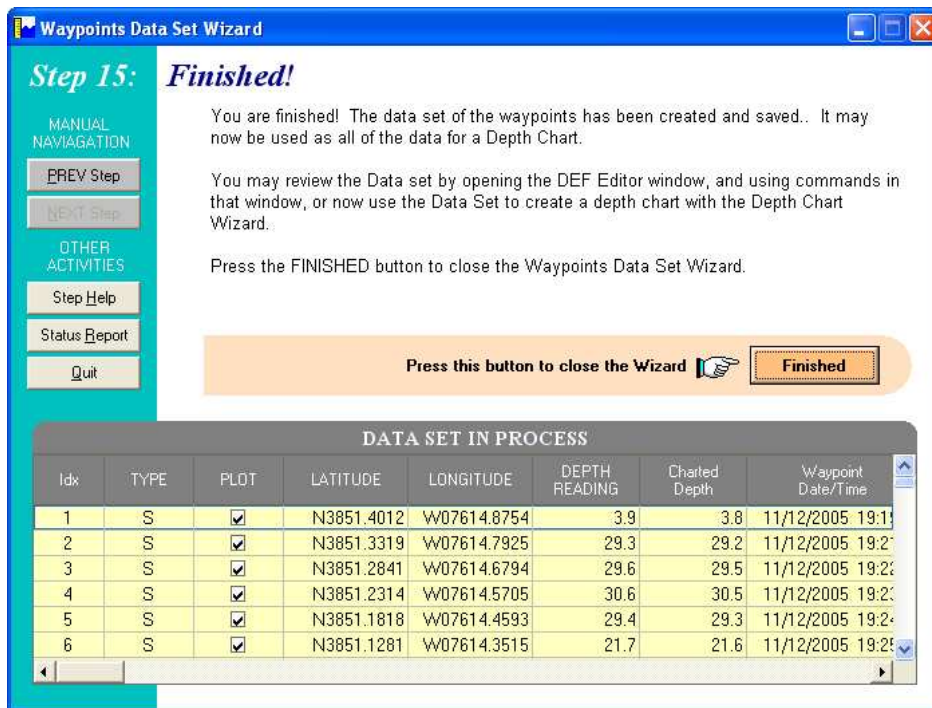
34. Again, while learning, read the explanation. Later, just click “Save Data”



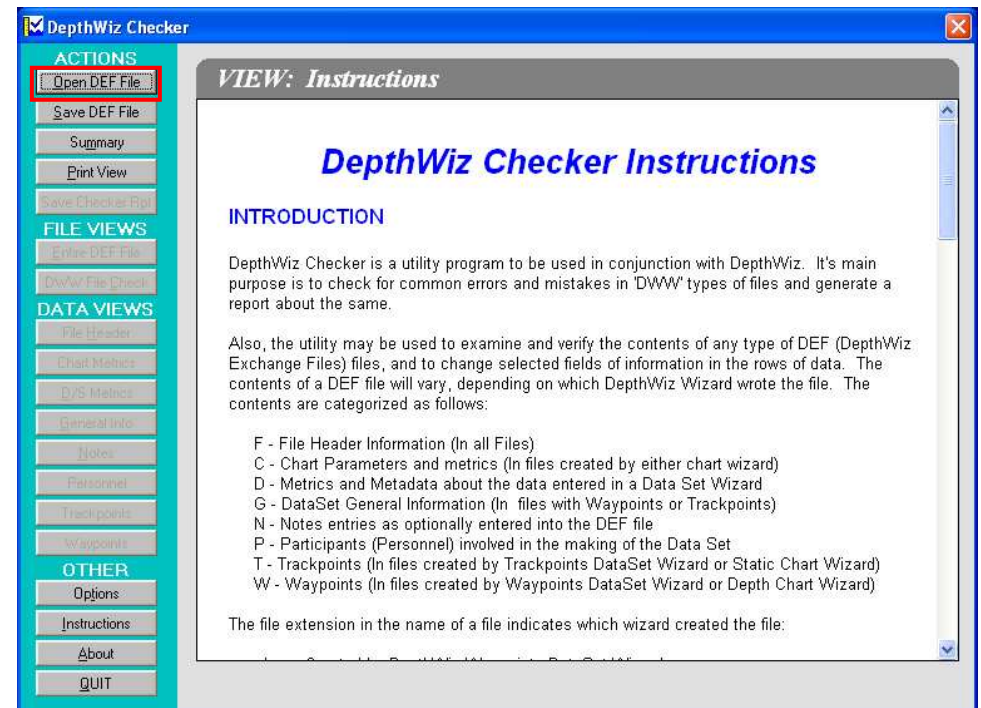
35. Select your target folder (we create a new folder for each survey) Then name your .dww file. Then click “Save”



36. You’ve just saved the file. Follow the pointing hand and click “Continue”



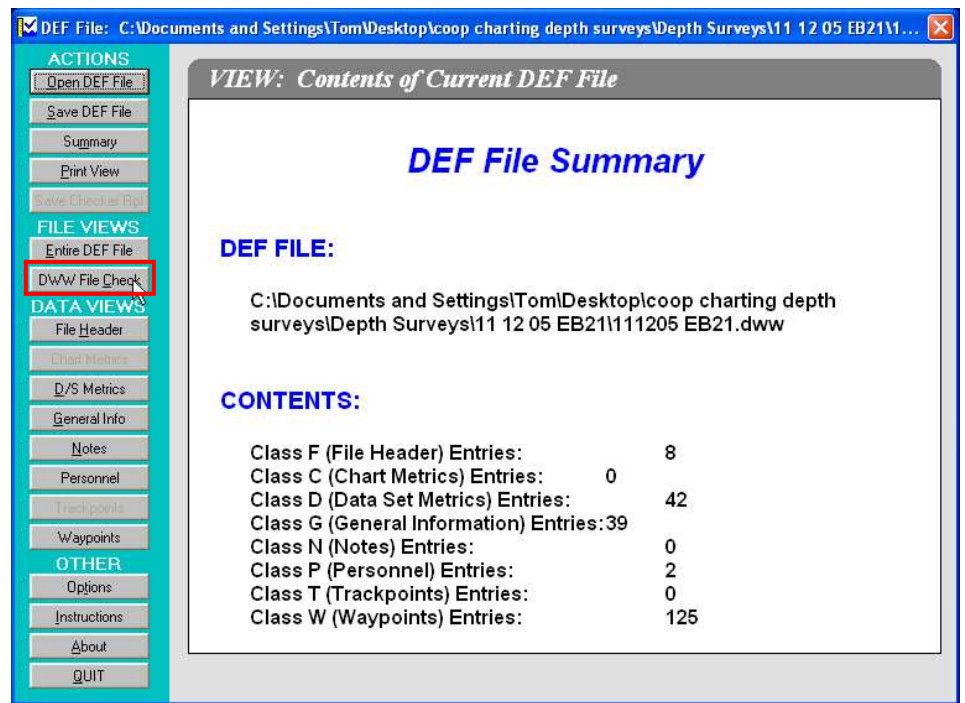
37. Bill Lazear recommends that before you click “Finish”, you open and run “**DepthWiz Checker**”, a sister software, to look for any errors (and look for any suspicious soundings that might require re-survey).



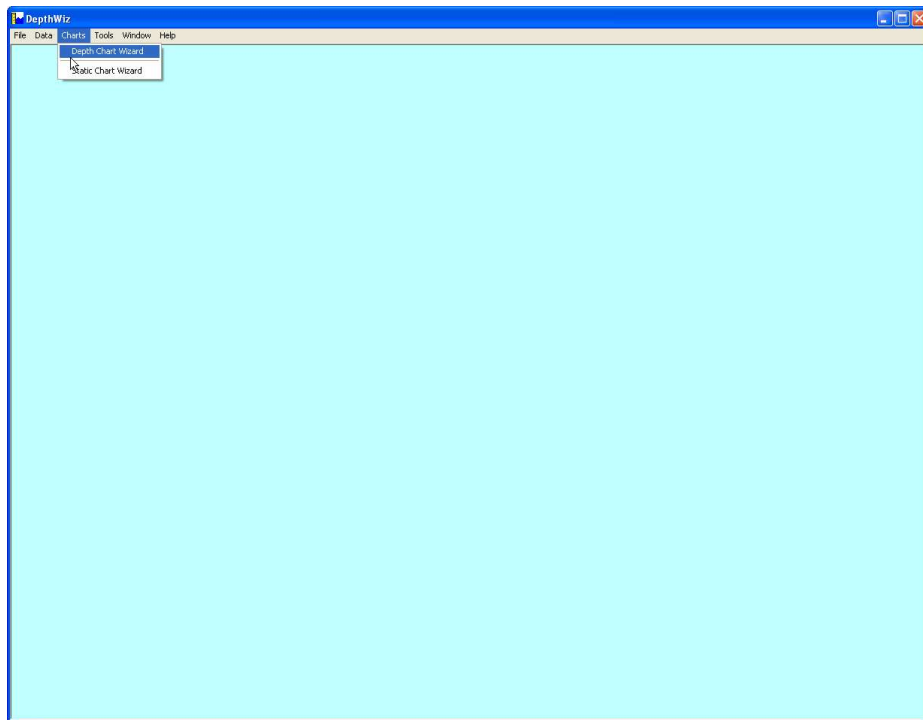
. Open DepthWiz Checker, then select “Open DEF File” (the .dww file you just created)



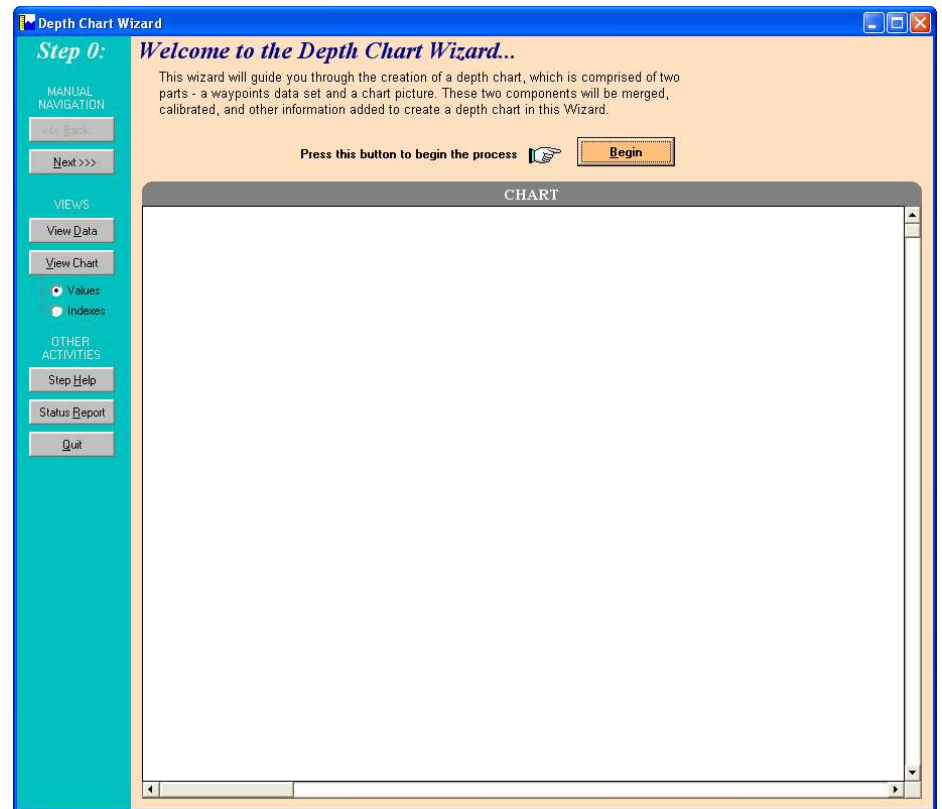
Find your .dww file then click “Open”.



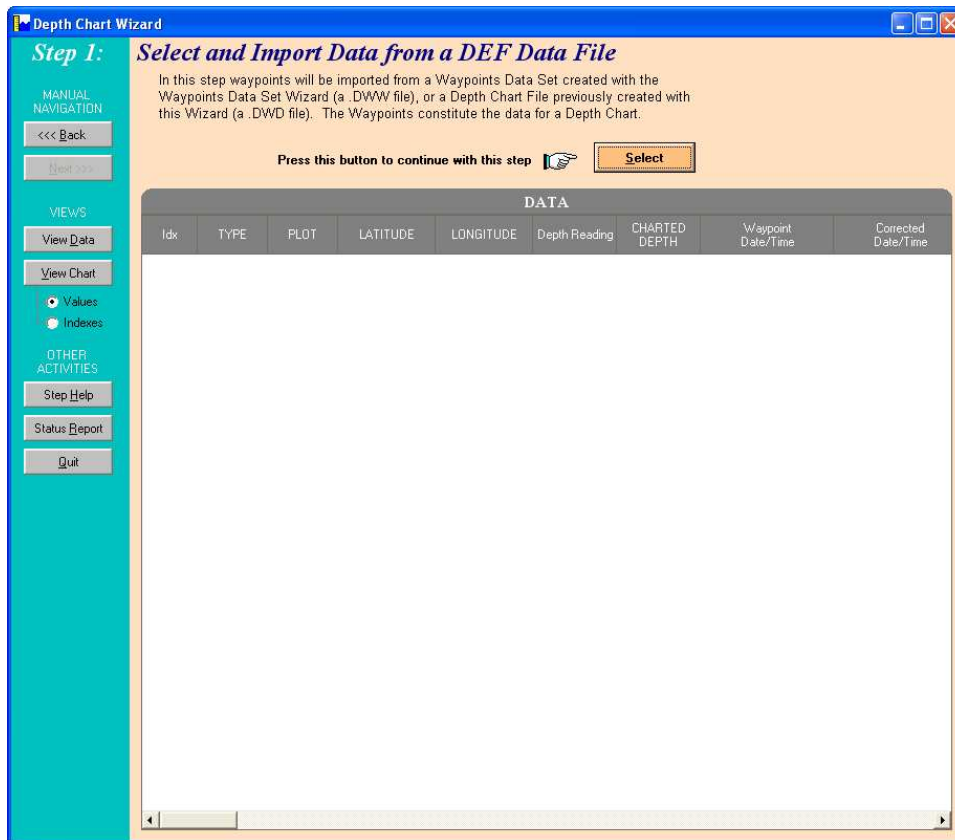
Click on “DWW File Check”. If you find any errors, correct them in DWiz which is still open (just go back through the steps and make your changes) and then save the .dww (which will overwrite the original)



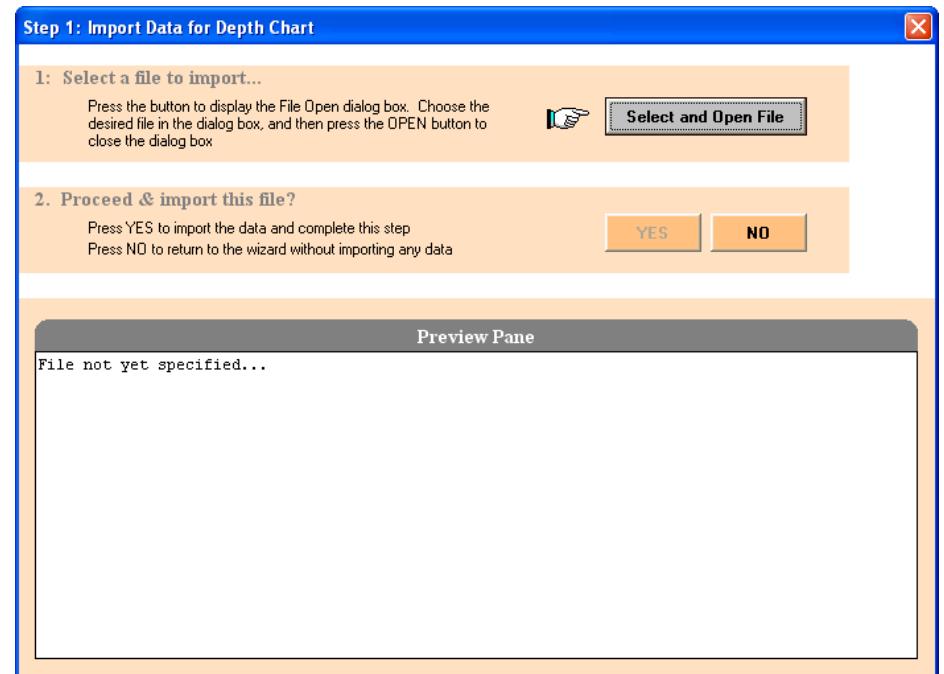
38. To have DWiz superimpose your soundings (now converted to MLLW) on a chart, click **Charts > Depth Chart Wizard**



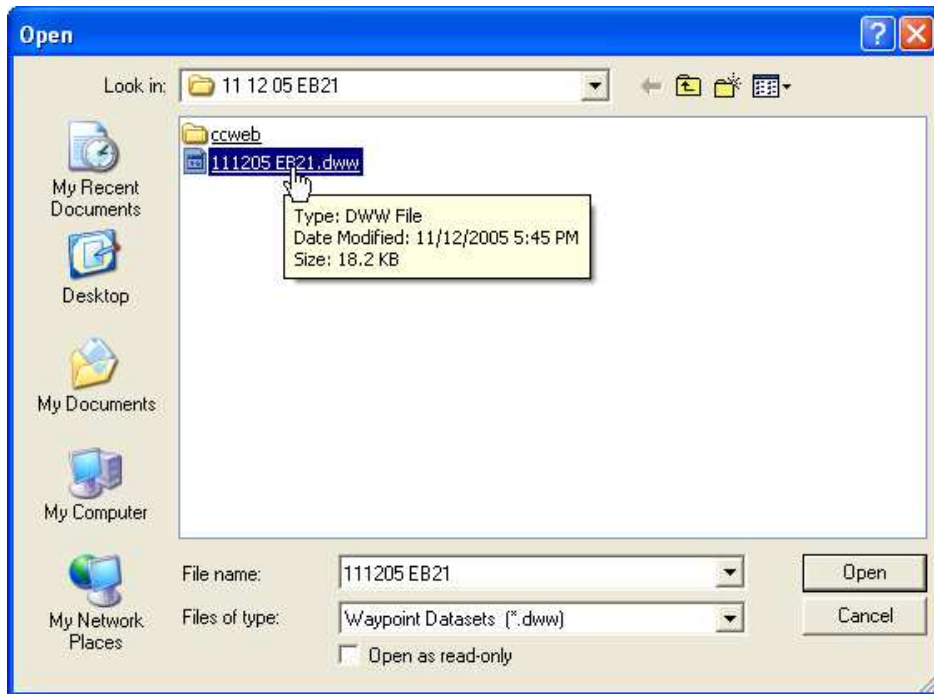
39. Again, while learning, read the explanation. Later, just click “Begin”



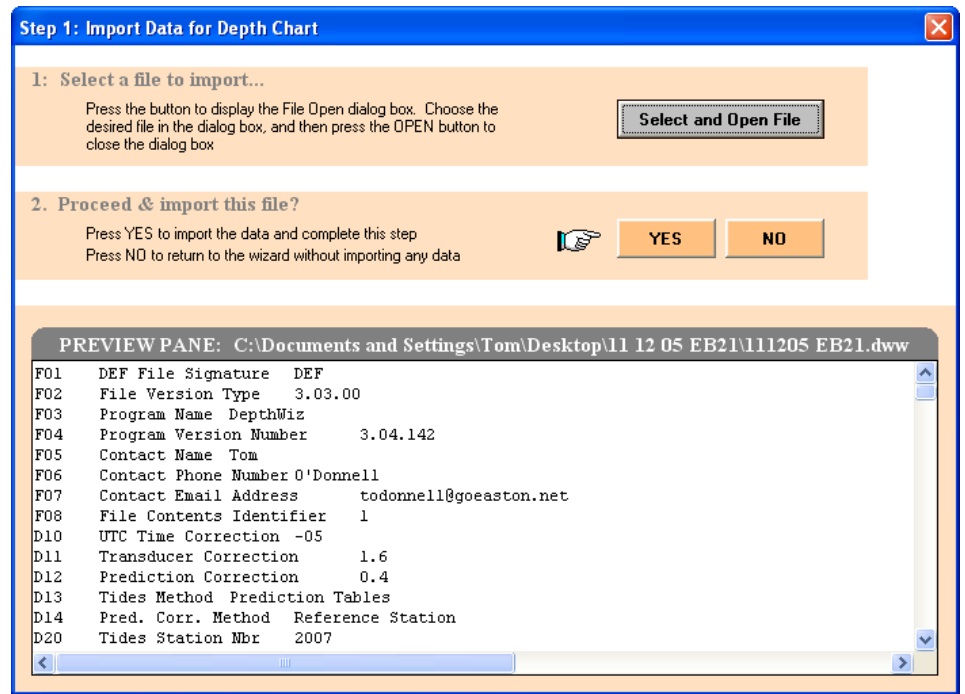
40. Again, while learning, read the explanation. Later, just click “Select”



41. Again, while learning, read the explanation. Later, just click “Select and Open File”



42. It should open the folder and display the .dww file you just created. Select it and click “Open”



43. Again, while learning, read the explanation. Later, just click “Yes”



**Depth Chart Wizard**

**Step 2: Review and Change Plotting Points**

Use this step to review the waypoints and to change which waypoints will be plotted. Data in columns with the column header in capital letters may be edited (changed). Optionally, the Plotting may be filtered on a wholesale basis. Press YES to open the Filters window, or NO to continue when ready.

Press one of the two buttons to continue **YES** **NO**

DATA								
Idx	TYPE	PLOT	LATITUDE	LONGITUDE	Depth Reading	CHARTED DEPTH	Waypoint Date/Time	Corrected Date/Time
1	S	<input checked="" type="checkbox"/>	N3851.4012	W07614.8754	3.9	3.8	11/12/2005 19:19	11/12/2005 14
2	S	<input checked="" type="checkbox"/>	N3851.3319	W07614.7925	29.3	29.2	11/12/2005 19:21	11/12/2005 14
3	S	<input checked="" type="checkbox"/>	N3851.2841	W07614.6794	29.6	29.5	11/12/2005 19:22	11/12/2005 14
4	S	<input checked="" type="checkbox"/>	N3851.2314	W07614.5705	30.6	30.5	11/12/2005 19:23	11/12/2005 14
5	S	<input checked="" type="checkbox"/>	N3851.1818	W07614.4593	29.4	29.3	11/12/2005 19:24	11/12/2005 14
6	S	<input checked="" type="checkbox"/>	N3851.1281	W07614.3515	21.7	21.6	11/12/2005 19:25	11/12/2005 14
7	S	<input checked="" type="checkbox"/>	N3851.0779	W07614.2409	13.6	13.5	11/12/2005 19:26	11/12/2005 14
8	S	<input checked="" type="checkbox"/>	N3851.0255	W07614.1297	31.1	31.0	11/12/2005 19:27	11/12/2005 14
9	S	<input checked="" type="checkbox"/>	N3850.9729	W07614.0204	32.6	32.5	11/12/2005 19:28	11/12/2005 14
10	S	<input checked="" type="checkbox"/>	N3850.9231	W07613.9090	34.5	34.4	11/12/2005 19:29	11/12/2005 14
11	S	<input checked="" type="checkbox"/>	N3850.8721	W07613.8004	37.0	36.9	11/12/2005 19:30	11/12/2005 14
12	S	<input checked="" type="checkbox"/>	N3850.8172	W07613.6920	40.2	40.1	11/12/2005 19:31	11/12/2005 14
13	S	<input checked="" type="checkbox"/>	N3850.7700	W07613.5780	48.7	48.6	11/12/2005 19:32	11/12/2005 14
14	S	<input checked="" type="checkbox"/>	N3850.7152	W07613.4708	40.5	40.4	11/12/2005 19:32	11/12/2005 14
15	S	<input checked="" type="checkbox"/>	N3850.6670	W07613.3578	31.8	31.7	11/12/2005 19:33	11/12/2005 14
16	S	<input checked="" type="checkbox"/>	N3850.6118	W07613.2501	23.7	23.7	11/12/2005 19:34	11/12/2005 14
17	S	<input checked="" type="checkbox"/>	N3850.5613	W07613.1371	11.3	11.3	11/12/2005 19:35	11/12/2005 14
18	S	<input checked="" type="checkbox"/>	N3850.5099	W07613.0273	10.4	10.4	11/12/2005 19:36	11/12/2005 14
19	S	<input checked="" type="checkbox"/>	N3850.4602	W07612.9226	8.3	8.3	11/12/2005 19:38	11/12/2005 14
20	S	<input checked="" type="checkbox"/>	N3850.4121	W07612.9283	7.6	7.6	11/12/2005 19:39	11/12/2005 14
21	S	<input checked="" type="checkbox"/>	N3850.4046	W07613.0349	7.9	7.9	11/12/2005 19:40	11/12/2005 14
22	S	<input checked="" type="checkbox"/>	N3850.4563	W07613.1457	8.9	8.9	11/12/2005 19:40	11/12/2005 14
23	S	<input checked="" type="checkbox"/>	N3850.5090	W07613.2554	18.3	18.3	11/12/2005 19:41	11/12/2005 14
24	S	<input checked="" type="checkbox"/>	N3850.5594	W07613.3668	25.9	25.9	11/12/2005 19:42	11/12/2005 14
25	S	<input checked="" type="checkbox"/>	N3850.6121	W07613.4779	34.8	34.8	11/12/2005 19:43	11/12/2005 14
26	S	<input checked="" type="checkbox"/>	N3850.6628	W07613.5893	55.1	55.1	11/12/2005 19:44	11/12/2005 14
27	S	<input checked="" type="checkbox"/>	N3850.7147	W07613.6997	40.3	40.3	11/12/2005 19:45	11/12/2005 14
28	S	<input checked="" type="checkbox"/>	N3850.7647	W07613.8124	35.2	35.2	11/12/2005 19:46	11/12/2005 14

44. We usually click "No"

**Depth Chart Wizard**

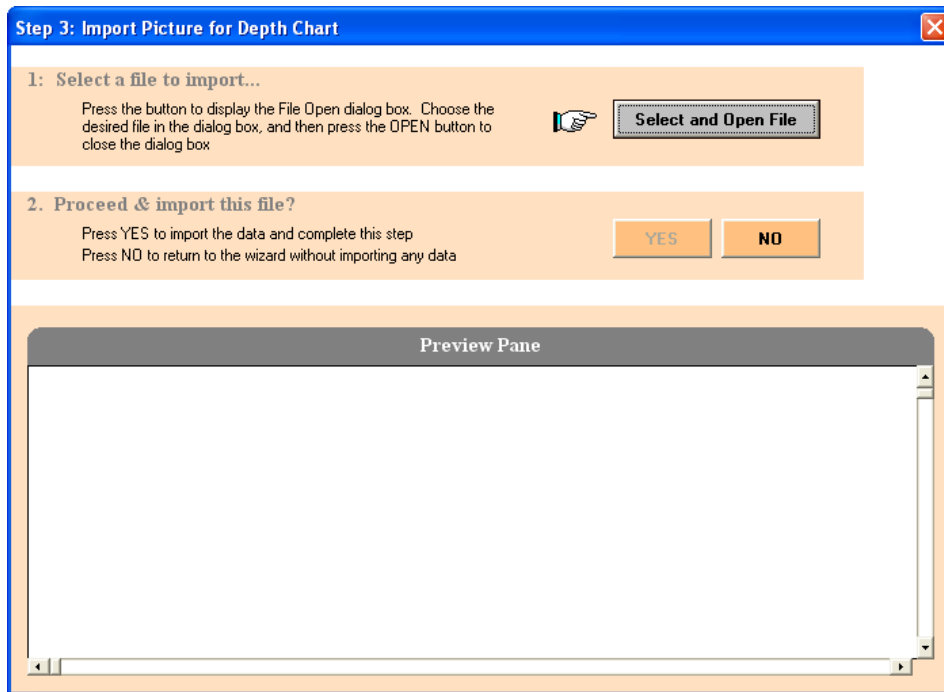
**Step 3: Select a Chart Picture File**

In this step a picture (JPG or Bitmap graphics file) of the related chart will be imported. It will serve as the background for the depth chart being created. Press the SELECT button to proceed with the selection process.

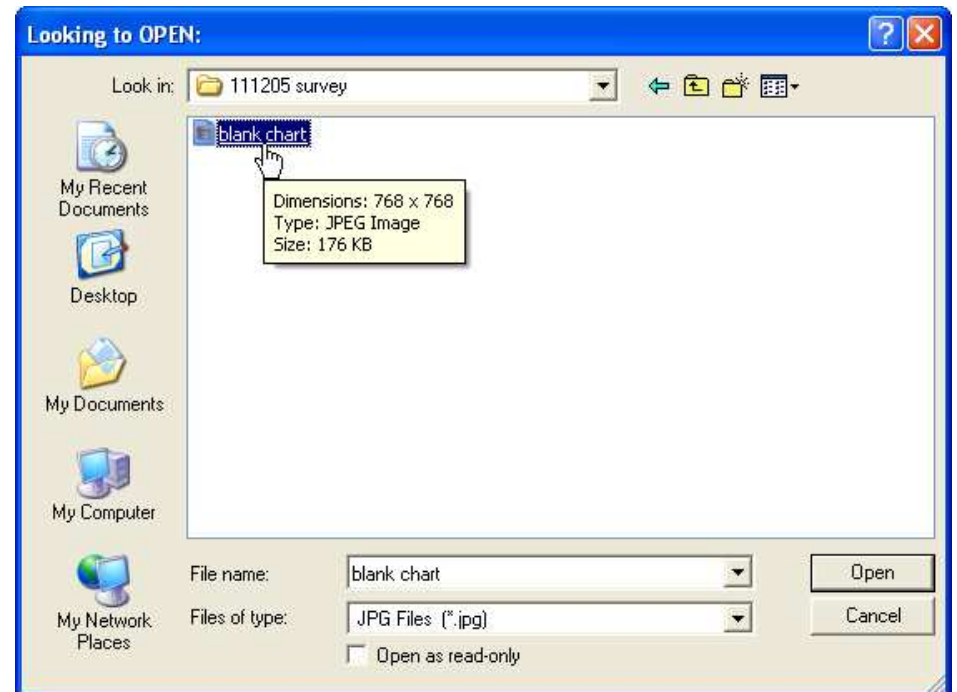
Press this button to continue with this step **Select**

**CHART**

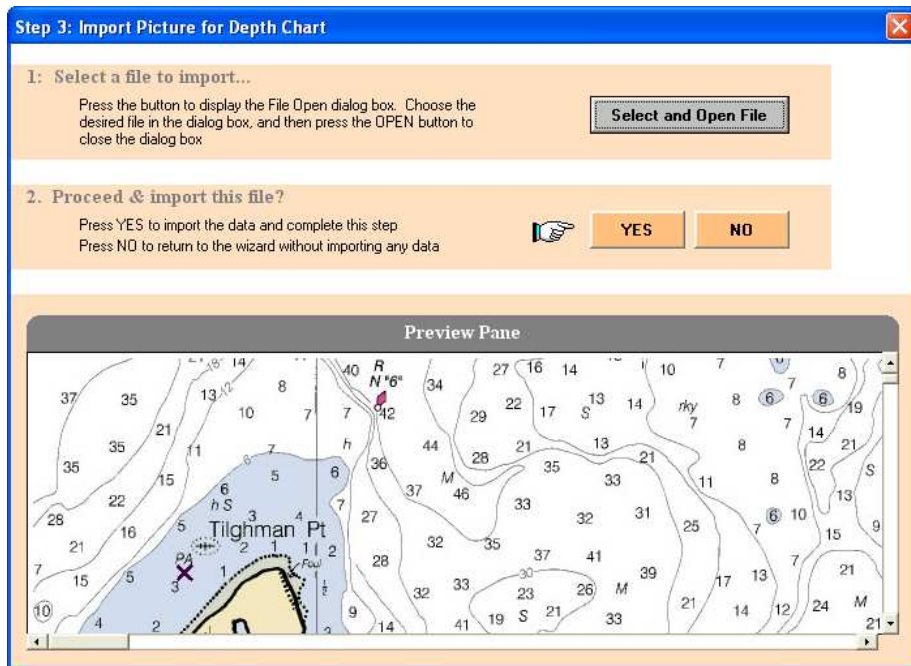
45. Again, while learning, read the explanation. Later, just click "Select"



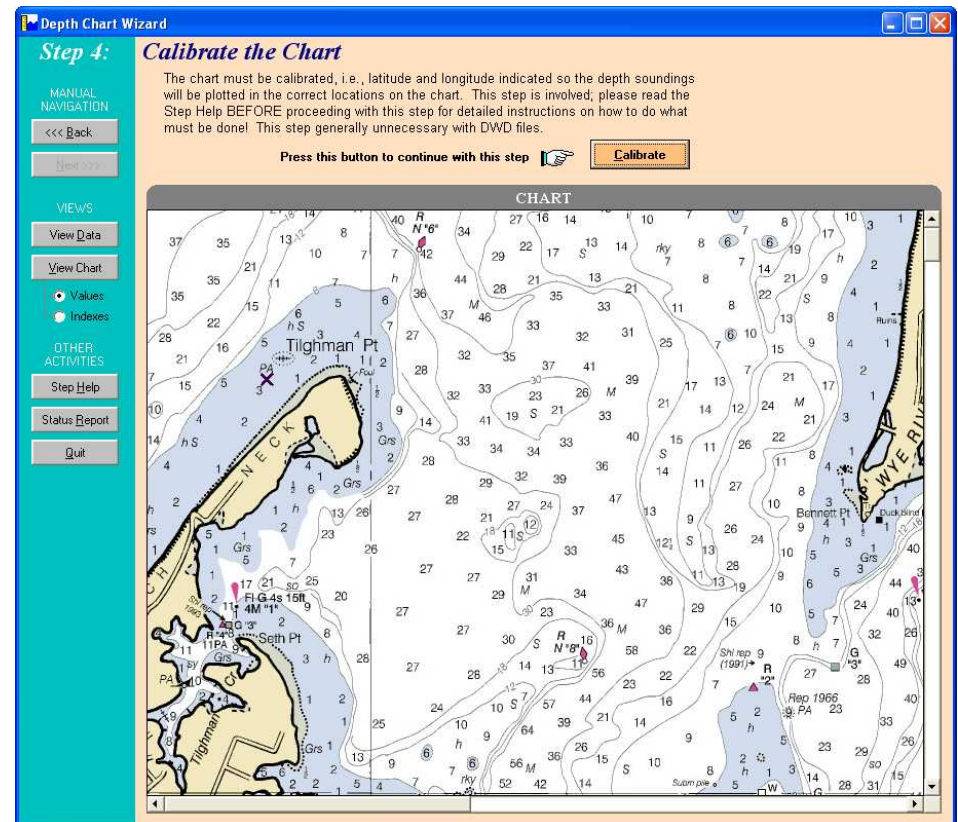
46. Again, while learning, read the explanation. Later, just click “Select and Open File”



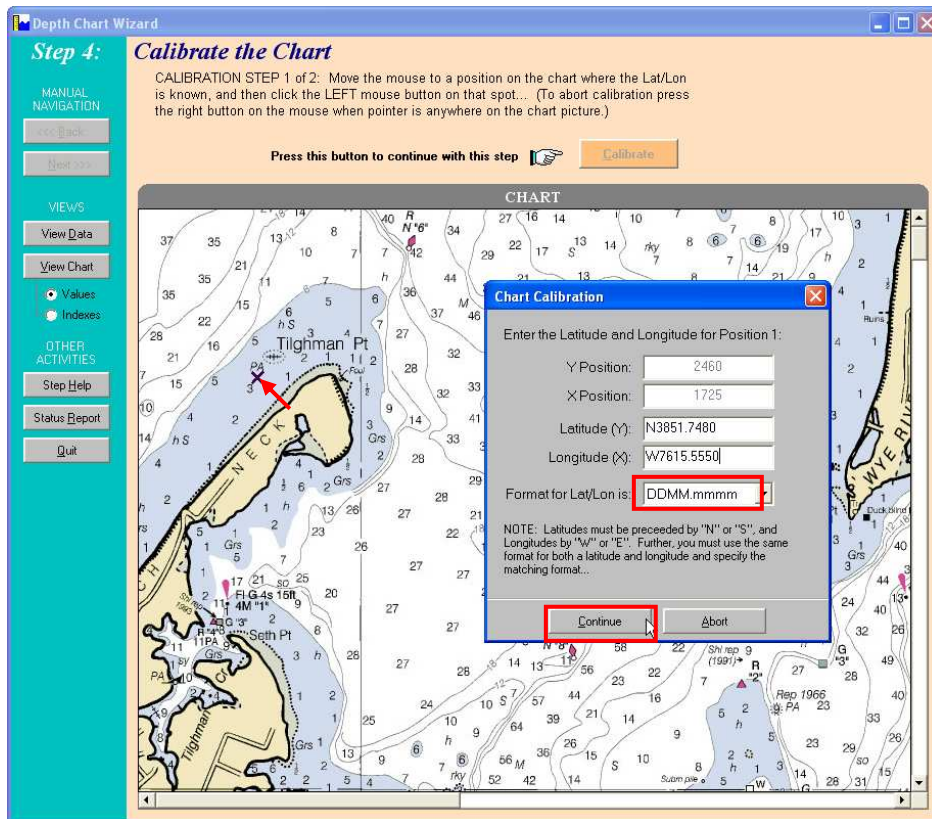
47. Select the chart jpg you created, from your screen capture of the Maptech chart and subsequent cropping/resizing, then click “Open”



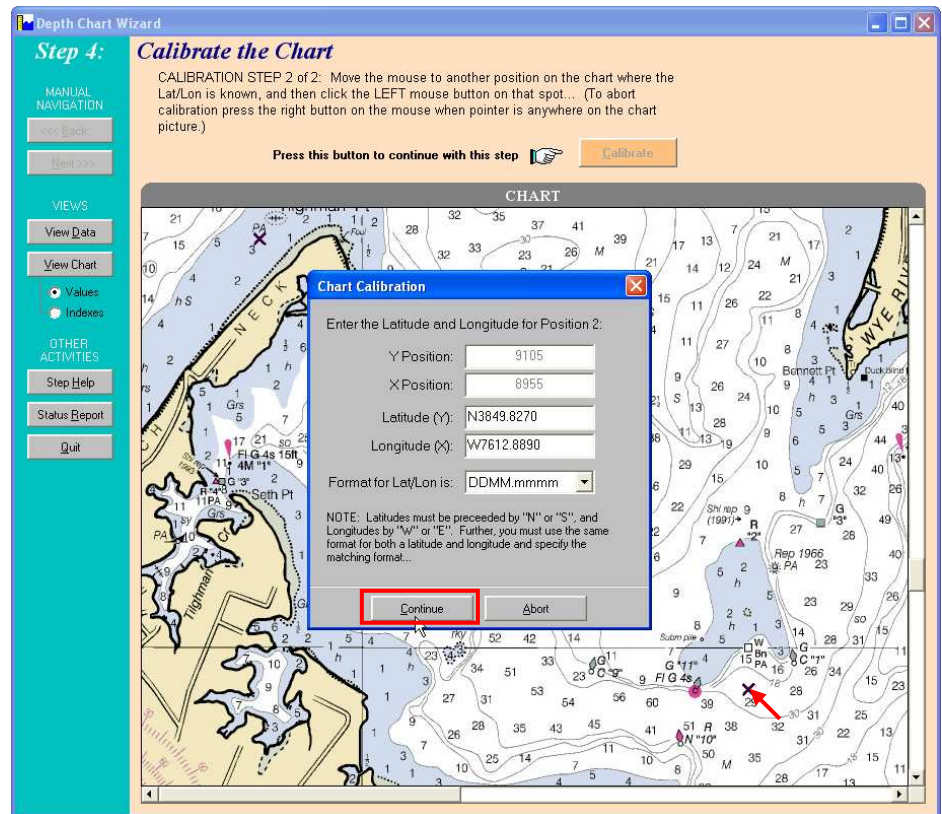
48. Again, while learning, read the explanation. Later, just click “Yes”



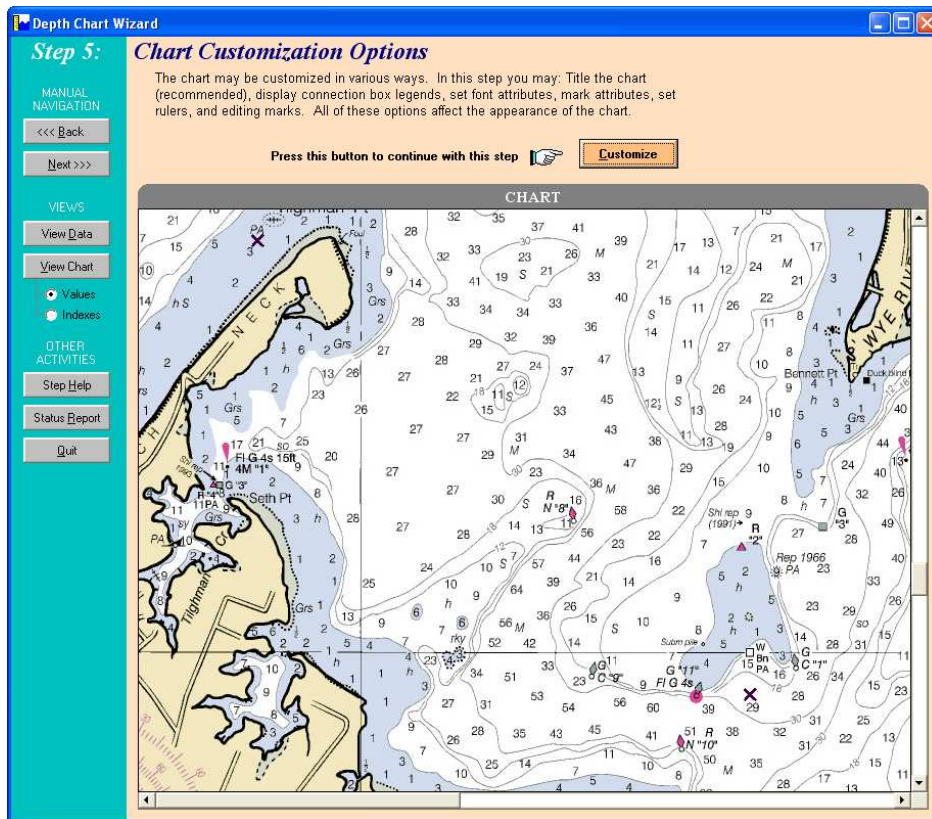
49. Again, while learning, read the explanation. Later, just click “Calibrate”



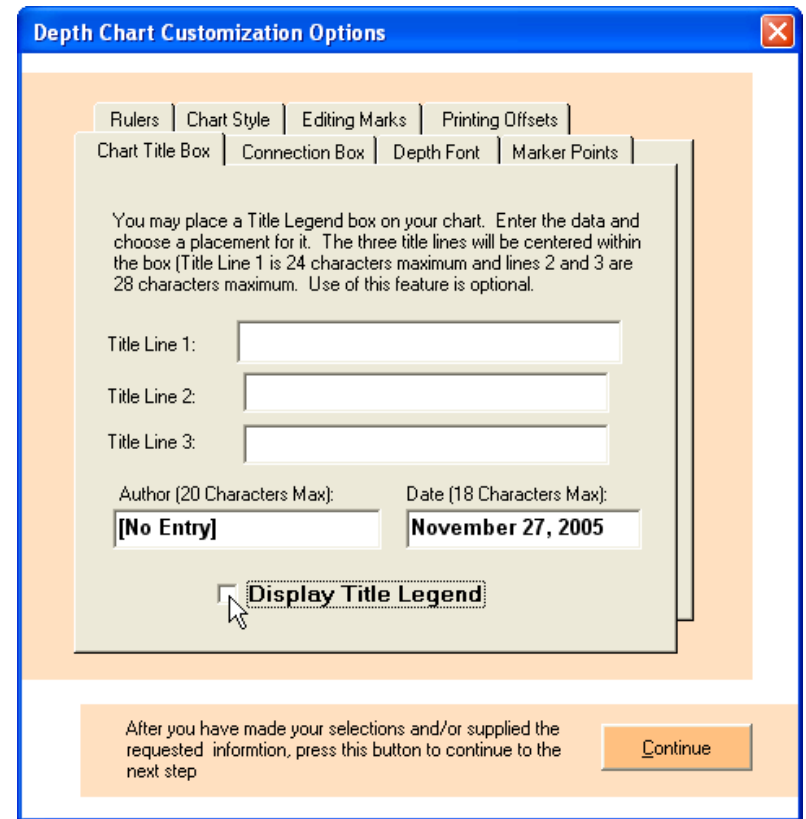
50. Center the cursor on your 1st calibration mark (at left upper), left click and type in the coordinates from your worksheet. Make sure you follow the designated format shown below. Click "Continue"



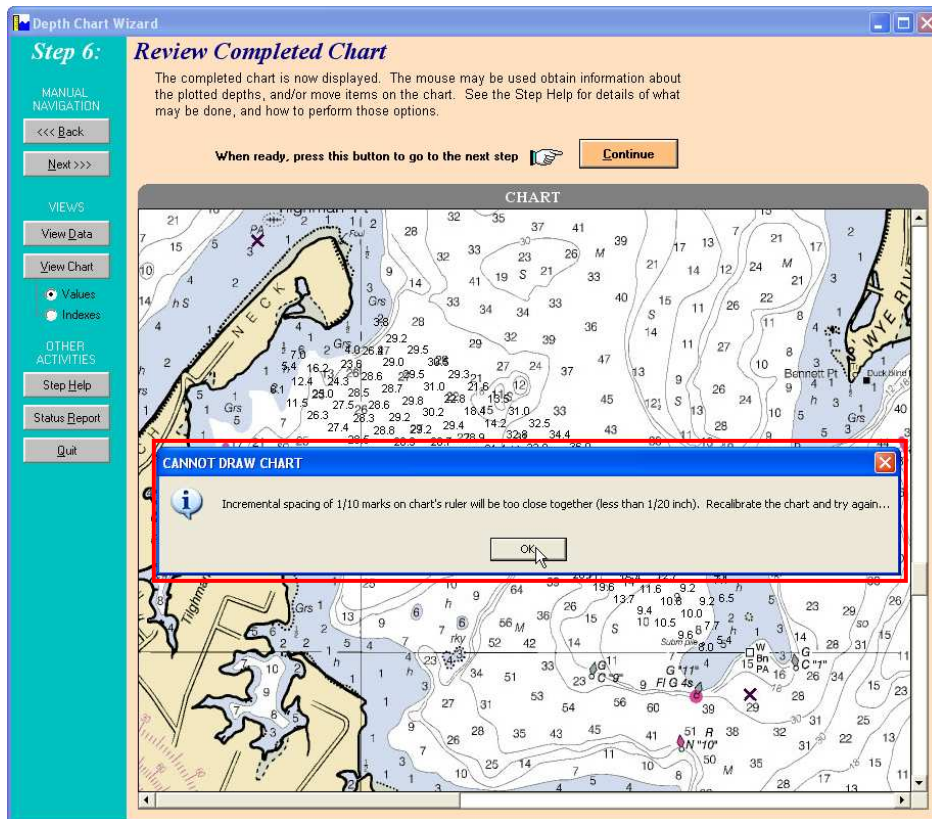
51. Center the cursor on your 2nd calibration mark (at right lower), left click and type in the coordinates from your worksheet and click "Continue"



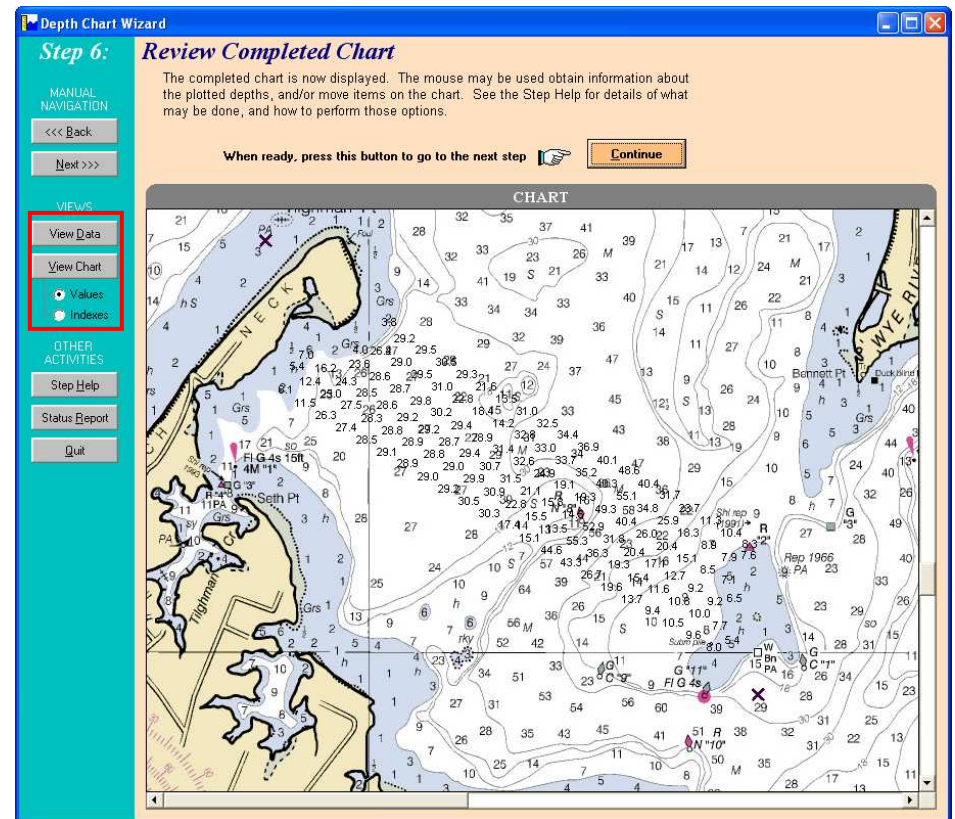
52. Again, while learning, read the explanation. Later, just click “Customize”



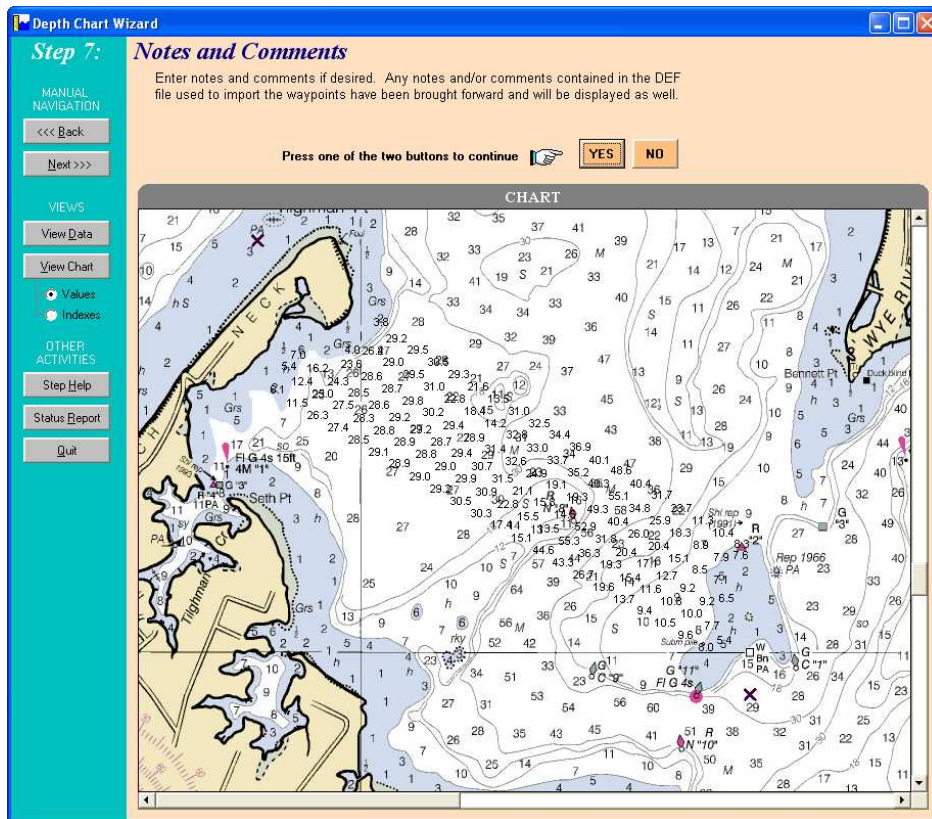
53. DWiz will create a label for your chart jpg. We do it later with our image editing program so we just uncheck “Display Chart Legend” then click “Continue”. Look at all the other custom features you have. We just accept the defaults



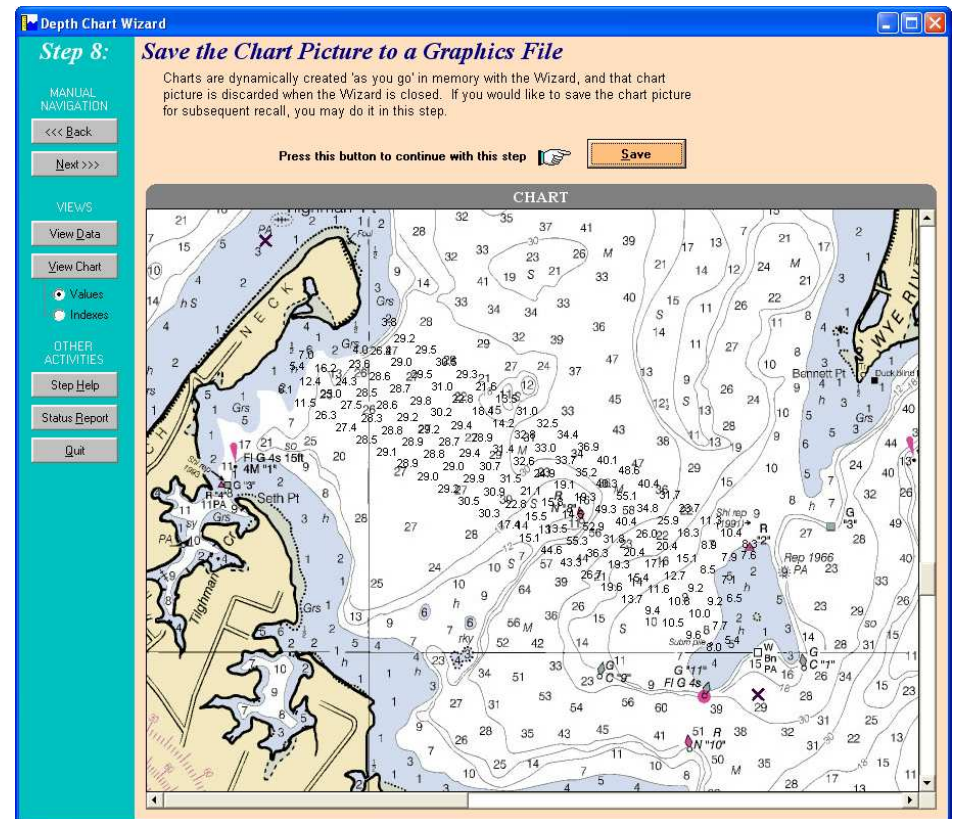
54. This disturbing widow appears (twice!). If your soundings are legible (can be read and don't overlap), just ignore this window. Click "OK" twice (to make each window disappear)



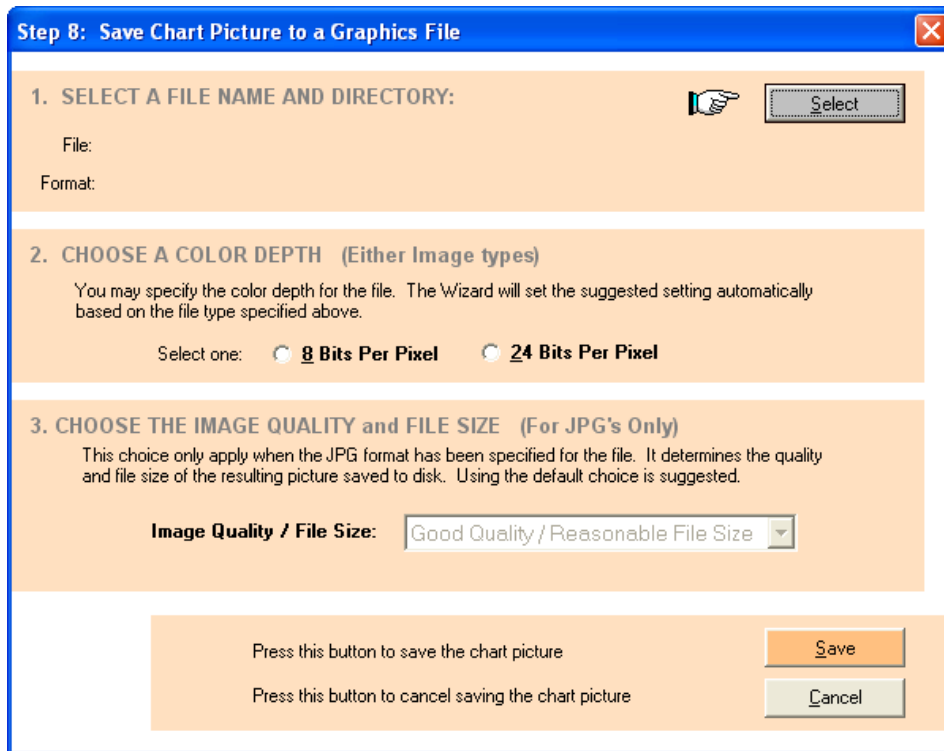
55. We'll look at some of the features available when we discuss the resurvey in Part III. For now just click "Continue"



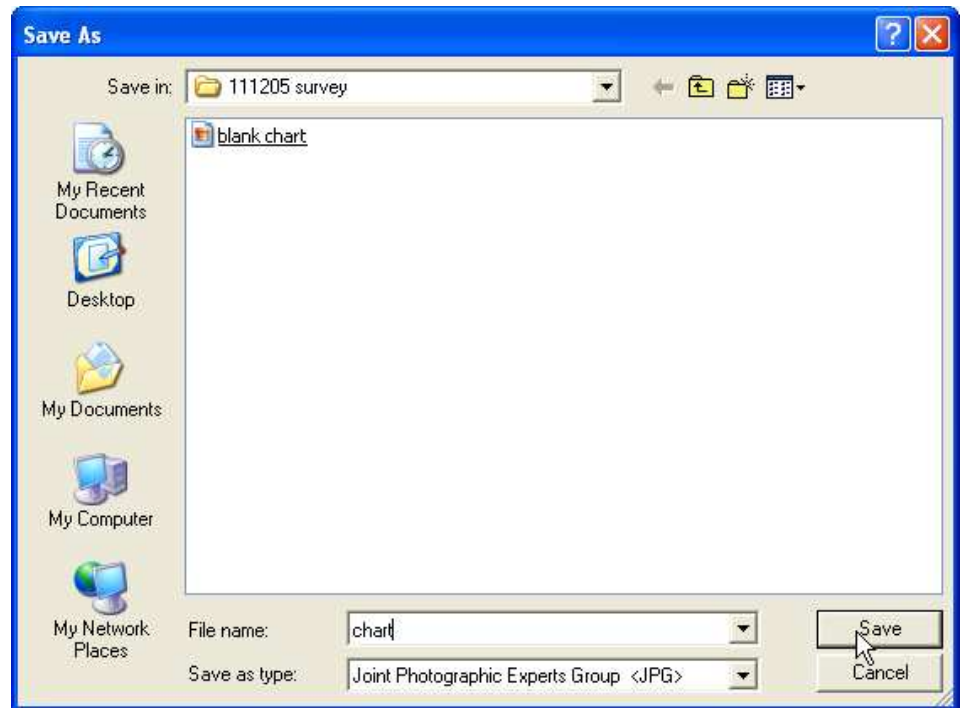
56. We usually just click “No”



57. You must do this. Printing the chart is optional, but you must send the chart graphic file to NOAA along with the .dww file. Just click “Save”



58. Just click “Select”. (Ignore everything else)



59. Find your target folder, name your new chart jpg (now with soundings overprinted) and click “Save”



**Step 8: Save Chart Picture to a Graphics File**

1. SELECT A FILE NAME AND DIRECTORY: Select

File: C:\Documents and Settings\Tom\Desktop\111205 survey\chart.jpg  
Format: Joint Photographic Experts Group

2. CHOOSE A COLOR DEPTH (Either Image types)  
You may specify the color depth for the file. The Wizard will set the suggested setting automatically based on the file type specified above.

Select one:  8 Bits Per Pixel  24 Bits Per Pixel

3. CHOOSE THE IMAGE QUALITY and FILE SIZE (For JPG's Only)  
This choice only apply when the JPG format has been specified for the file. It determines the quality and file size of the resulting picture saved to disk. Using the default choice is suggested.

Image Quality / File Size: Good Quality / Reasonable File Size

Press this button to save the chart picture Save  
Press this button to cancel saving the chart picture Cancel

60. You really don't need to make any choices here. Just accept the DWiz defaults and click "Save"

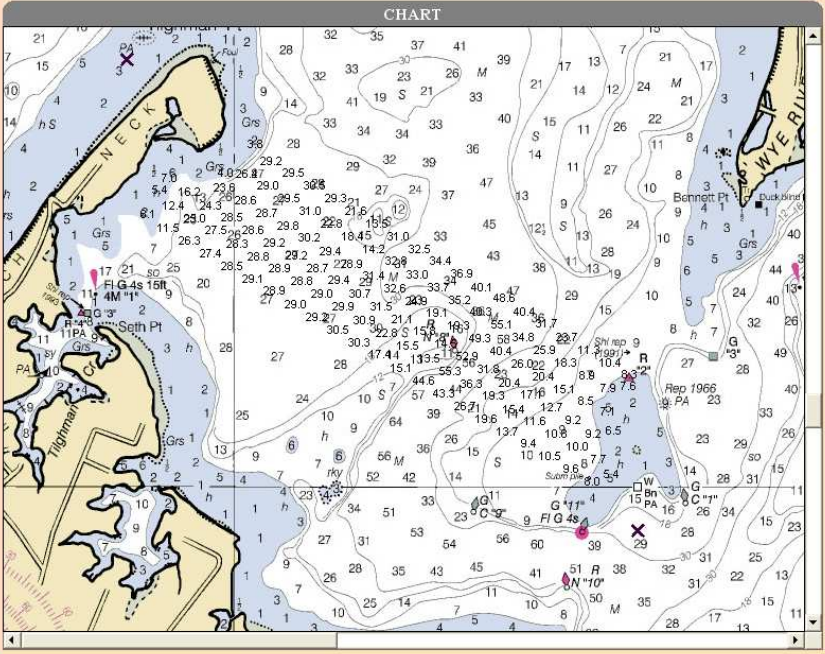
**Depth Chart Wizard**

**Step 9: Save the Data to a DEF File**

Charts are dynamically created 'as you go' in memory with the Wizard, and that information is discarded when the Wizard is closed. If you would like to save the chart parameters and data for subsequent recall, you may do it in this step.

Press this button to continue with this step Save

**CHART**

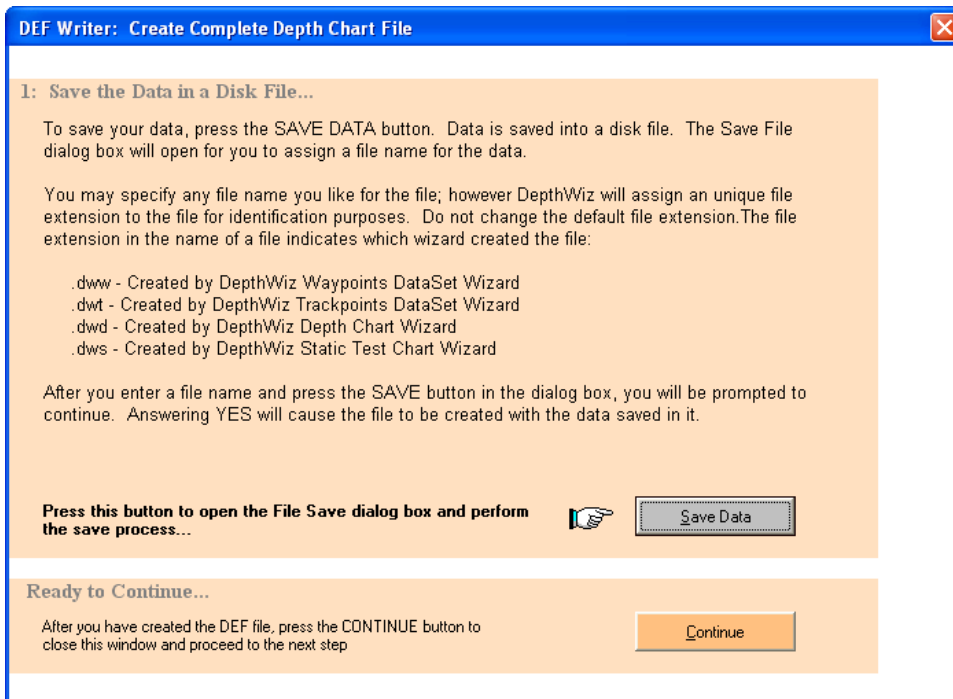


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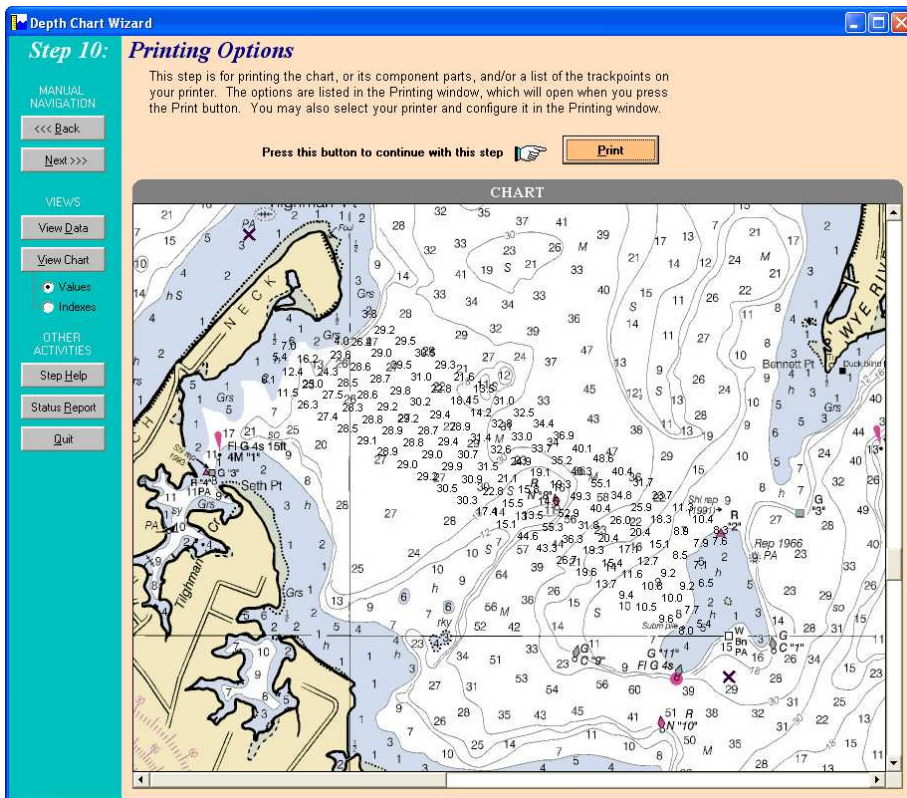
61. You'll want to save this file, which will contain all the plotting data (that is, all the soundings referenced to the chart jpg).. Just click "Save"



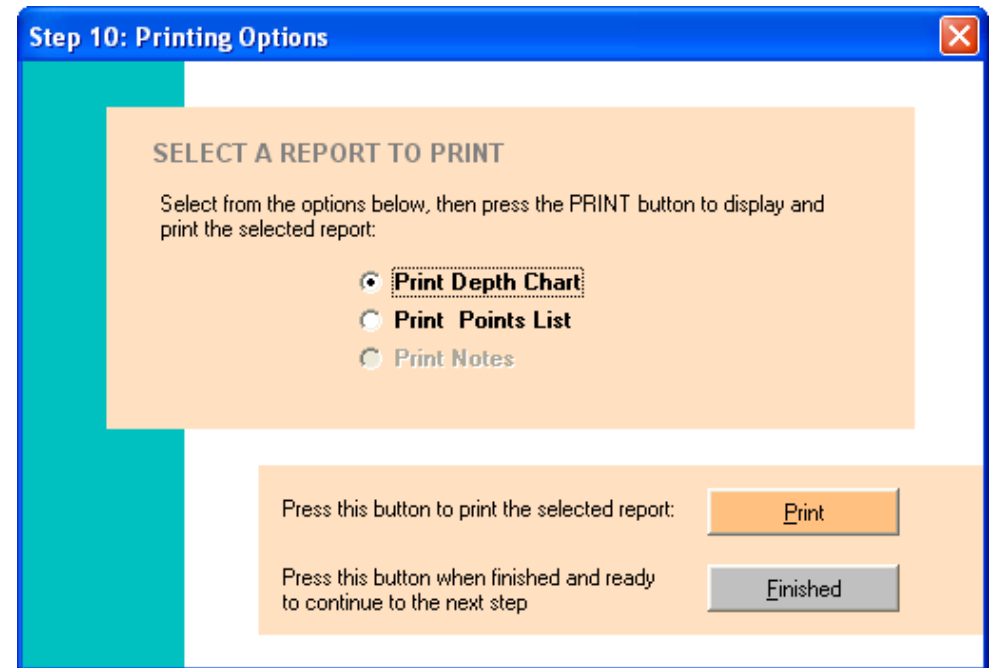
62. You can read all this if you like, but you want to save as a **.dwd** file, the default. Just click “save Data”



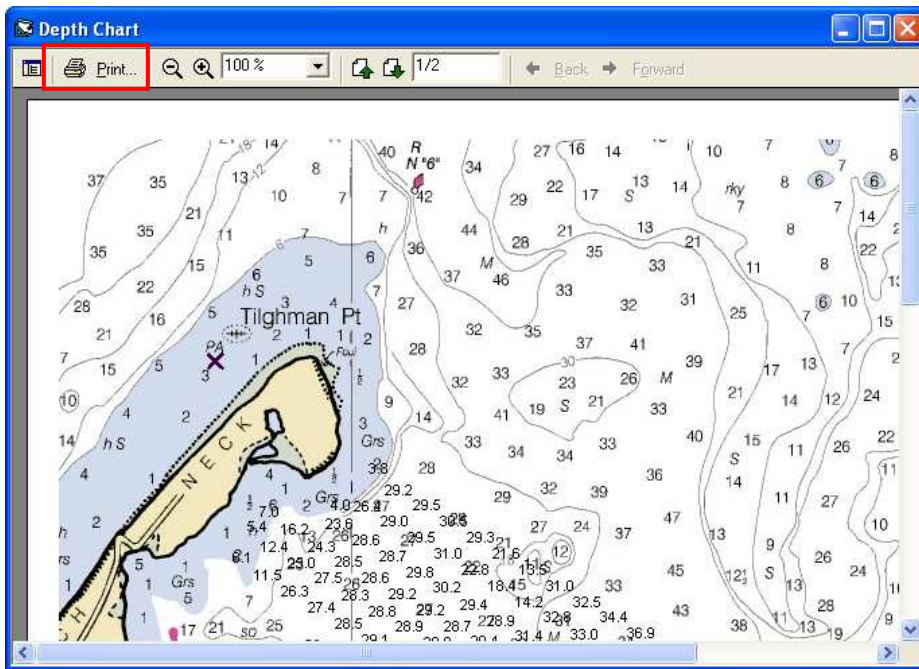
63. Select your target folder and file name, then click “Save”



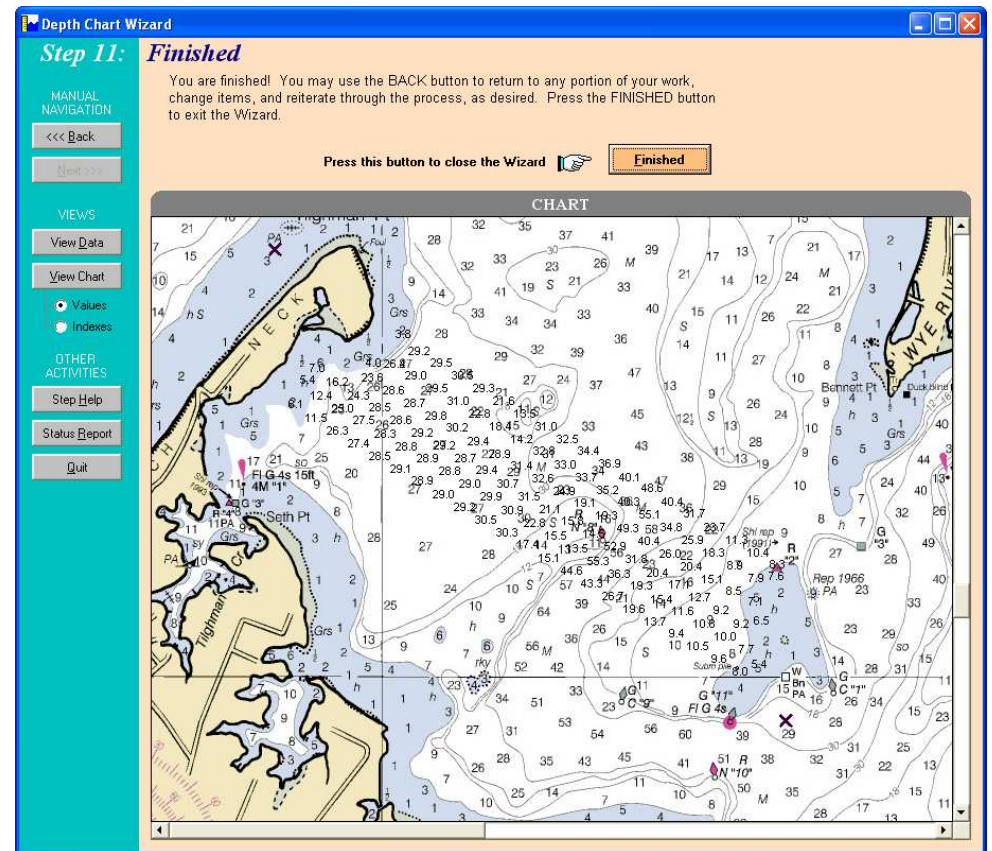
64. If you'd like a hard copy print for your records, click "Print".  
(The electronic chart file goes to NOAA, not the print.)



65. If you wish to print the chart, accept the default and click "Print"



66. Click “Print” at the top left



67. Unless you want to go back and review something, you’re done. Click “Finished”.

Next Section  
Part III—The Resurvey