Reef GPX File Waypoints User Manual

Contains detailed instructions on how to use your GPX waypoint file

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INTRODUCTION

Over the years the State and County have been putting down concrete, steel and other material to form artificial reefs where fish can gather and populate.   However, for many years the location of the deployment was recorded using Loran and GPS system where the accuracy was intentionally being decreased for national security. In addition, the tug boat, barge and crane offset distances contributed to the inaccuracies. When a deployment was made, the correct location typically was inaccurately recorded. In an effort to eliminate the wasted time and gas driving around looking for dive and fishing sites, we developed a method to visualize the bottom and provide an extremely accurate and detailed map of the bottom structures.

About Contour Charts
The contour maps we produce are a birds-eye (overhead, looking directly down) view of ocean topography (bottom contours or bathymetry). Typically, the closer the contour lines are the sharper the increase or decrease in depth which may indicate a wreck, ledge or reef which attract fish and the greater likelihood you will catch one.   Scuba divers will love the ability to see the height and position of the structures and drop anchor, right "down the hatch". Fisherman will love putting the hook right on the structure and "in the fish's mouth".   The places to fish and dive are obvious on the charts and extremely accurate.

How the Data Was Collected
Three boats were used for the past 18 years in the collection of hundreds of thousands of sonar data points with the corresponding WAAS GPS Latitude and Longitude from each reef. All contour charts are created from sonar data while slowly "trolling" in a "mowing the lawn" pattern directly over each reef or wreck. For example, more than 25,000 samples were collected for just one area reef.   Official county waypoints were used as a starting point and the entire area was scanned. When structures were detected, additional close-in scanning was performed to enhance detail.

How the Plots Were Created
The collected position and depth data is then adjusted for tides, interpolated to fill in uncollected data and analyzed to visualize the bottom.   Official county waypoints were overlaid on the plot and the reef deployment data was correlated to nearest detected targets.   In some cases, the sites were confirmed by an underwater camera or by scuba diving the site.

How To Use These GPX Files
After the entire area was plotted, we picked a select number of high-profile sites and assigned them as a waypoint. These waypoints were assembled into a GPX file which can be loaded into most GPS units, laptop software and tablets.   Please refer to the GPS user manual on how to accomplish this as it varies by manufacture.   Some have SD card that you load and insert.   Some require you to connect the GPS to a computer to download the files. Whatever the method, you would then select "GO TO" on the GPS, scroll to the desired waypoint and press Enter (or equivalent on your GPS). Most GPS units will show the distance and bearing to the waypoint with a line to follow to get there.

NOTE: All views on these charts should not be used for navigation.

Contacts
For additional information contact CSS Inc. at 941-739-8394 and please leave a message as I am usually out scanning new reefs and wrecks.   Even better is to E-Mail us at Bob@reefsnwrecks.com and we will promptly return your Email.   Checkout our free reef offers for the Alan Fisher reef later in this manual.

About the GPX Format

The data in the GPX files are intended to be downloaded into your handheld or helm mounted GPS unit and also into your PC for use with OpenCPN and into your mobile device for use with SeaIQ.   Each file contains a number of high profile waypoints which includes the Latitude and Longitude along with a description of the reef, its depth and relief along with the date of deployment.   The reef description also contains the distance and heading from at least one inlet or reference point.

After downloading you will need to load the file into your GPS/device.   To do this I would recommend getting the user manual for your GPS and look for the section "Loading a GPX File".

You will also need a PC to download the custom contour maps from our website, unzip the files and download the files to a SD or MicroSD card.

Determine what size SD card your GPS unit requires, SD or MicroSD.   An 8GB to 16GB Micro SD should be more than enough room for dozens of maps.   If you need a micro SD card, make sure you purchase the Micro SD adaptor for the MicroSD card.   Many times, they are sold together.

MicroSD Card and Adapter

Your computer will also need to have a drive for SD cards.   If one is not built in, you will need to purchase one at your local store.

External SD Card Reader

About other Formats

We have other file formats that provide a visual picture of the bottom contours and can be purchased for a few dollars more. All formats include this GPX file.

We are working hard to produce other formats for other devices.   Please contact us if you need support for Raymarine. Check back often to the website as we will be adding additional formats as they are developed.

All the different formats will allow you to find the exact position for a perfect day of fishing or diving.

About the Areas

We are also working hard to expand our coverage area.   We have scanned over 200 sites around Florida and have started to expand further north and south. Check back often to the website, as we will be adding additional reefs and wrecks on a weekly basis.

Contributions

If you have a boat, good quality GPS/Depth sounder and are interested in joining our data collection team, please contact us at Bob@ReefsnWrecks.com.   If you have a favorite area that you would like scanned, let us know and you will receive the completed scan in the format of your choice for free and a promise to limit the sale of that site.

Reefsnwrecks Website

Below is a screen shot from the ReefsnWrecks home page.   It has a series of tabs along the top row listing the Florida counties we have made custom contour charts for. In the following examples I have chosen the SARASOTA tab (yellow highlighted)
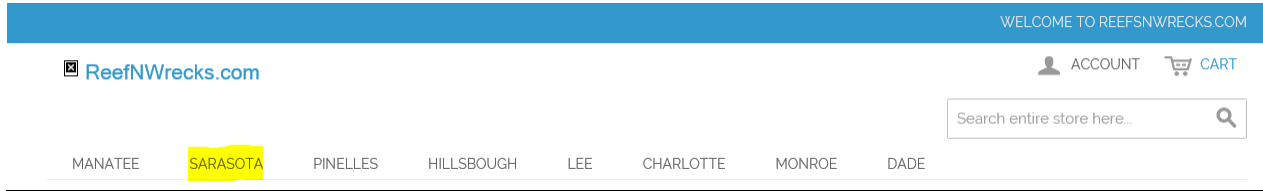
When that screen comes up, you will see an overall map of the area showing the name and location of all the reefs, ledges and wrecks that we have available for you to purchase and download to your system for immediate use.
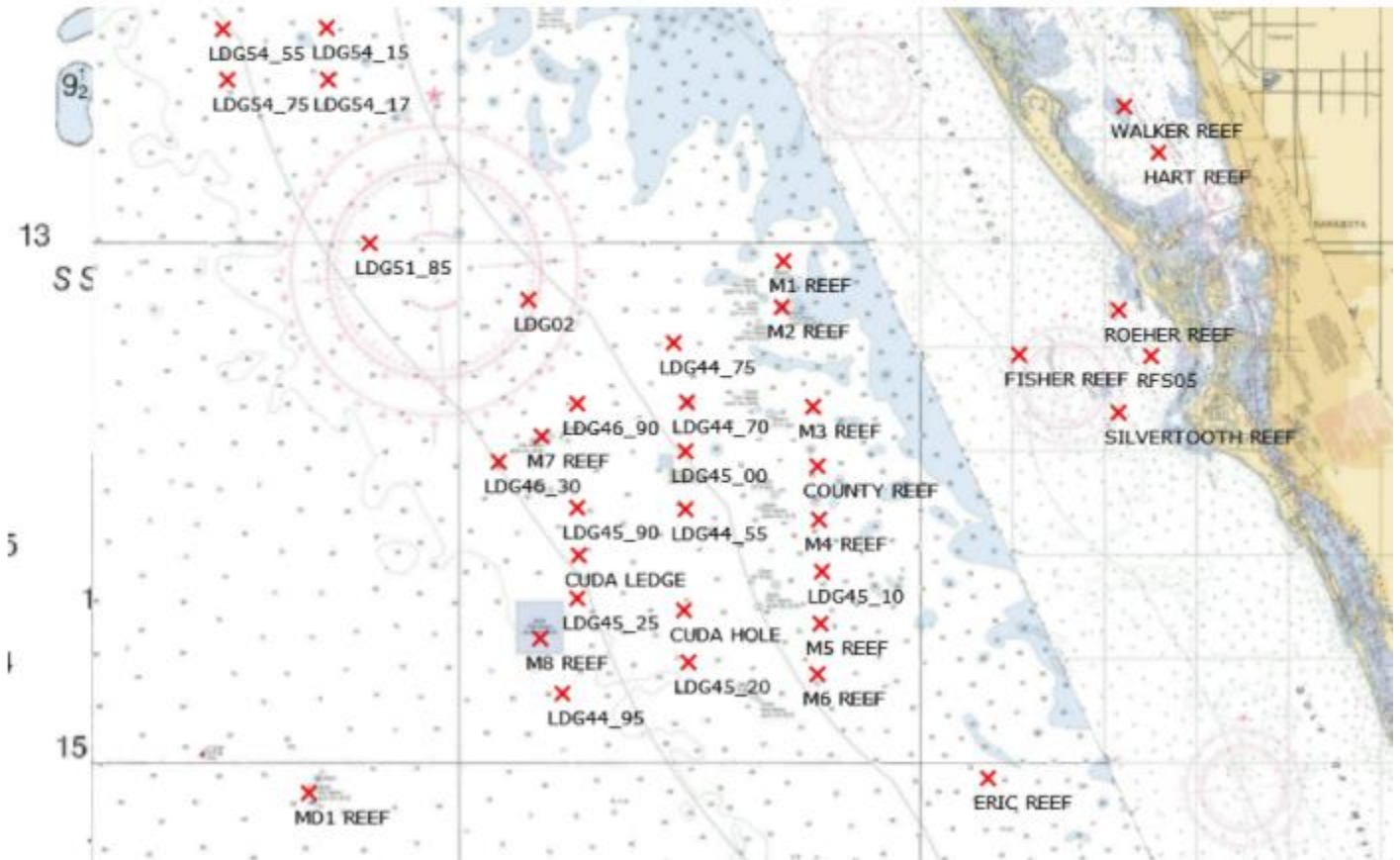
Scroll down the page and view the various reefs we have available.   Selecting the left box in the Shopping Options section at the top of the page just under the county map.   This view of the page gives you a little more detail and a description.
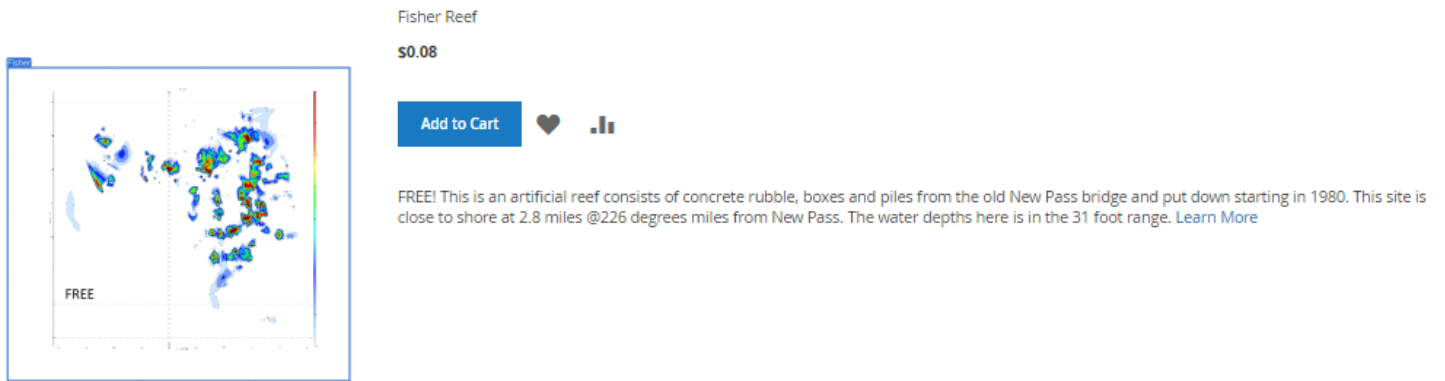
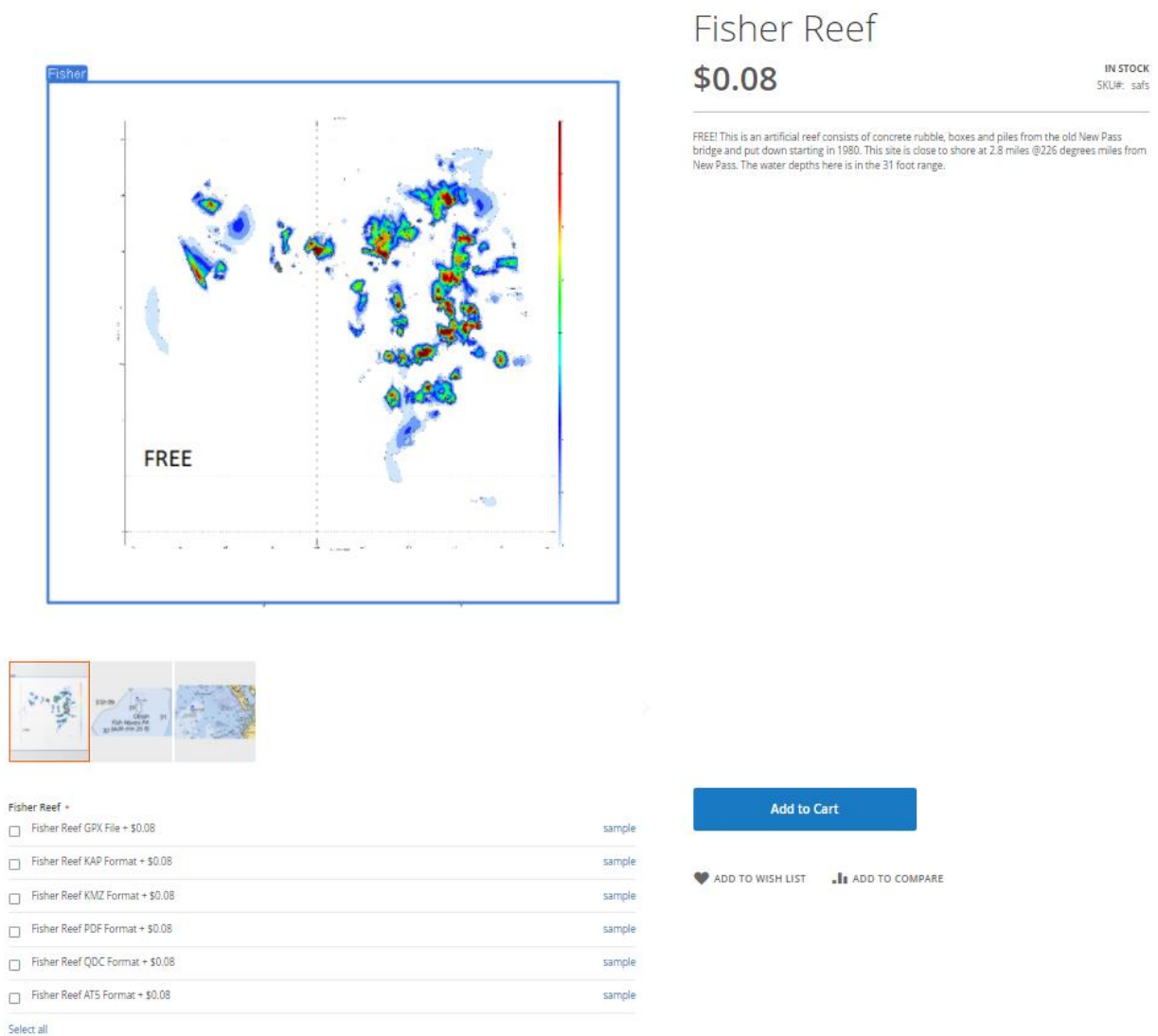For example, if you selected Sarasota, Fisher Reef, you will see the following screen:

Fisher Reef

$0.08

Add to Cart

FREE! This is an artificial reef consists of concrete rubble, boxes and piles from the old New Pass bridge and put down starting in 1980. This site is close to shore at 2.8 miles @226 degrees miles from New Pass. The water depths here is in the 31 foot range. Learn More

If you left mouse click on the reef chart or the reef name it will take you to the format selection and Add to cart page.

Fisher Reef

$0.08

IN STOCK
SKU#: safs

FREE! This is an artificial reef consists of concrete rubble, boxes and piles from the old New Pass bridge and put down starting in 1980. This site is close to shore at 2.8 miles @226 degrees miles from New Pass. The water depths here is in the 31 foot range.

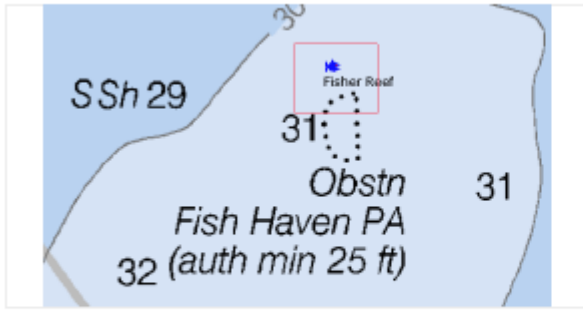Fisher Reef +

☐ Fisher Reef GPX File + $0.08   sample

☐ Fisher Reef KAP Format + $0.08   sample

☐ Fisher Reef KMZ Format + $0.08   sample

☐ Fisher Reef PDF Format + $0.08   sample

☐ Fisher Reef QDC Format + $0.08   sample

☐ Fisher Reef AT5 Format + $0.08   sample

Select all

Add to Cart

♥ ADD TO WISH LIST   .ıı ADD TO COMPARE

On middle left of the screen, you will see 3 thumbnail views. For each reef or wreck we have provided three views, a sample of the actual reef contour map, a close-up of the location on the NOAA chart showing the red custom

contour reef map coverage and a third view zoomed out so you can get a better idea where the reef or wreck is located.

On the right side you will see a description of the reef or wreck, the distance off shore and bearing from the nearest inlet or landmark. On the bottom there is a list of file formats that you can select to purchase.   You can select one or all depending on your needs and equipment.

If you select SAMPLE you will be able to download a copy of that format's user manual which has details on ordering, installing and using the selected format.

The GPX format is a file containing the latitude and longitude of points of interest for that reef. It includes all material drops made on an artificial reef, the center of a wreck or a few points along a ledge or drop-off.   It is included in all the formats or is available by itself at the base price.

When you select other formats, it adds the additional cost indicated to the base price.   For example, ordering the PDF format in the example above will cost $2.99 (GPX) + $1.99 (PDF) = $4.98.   Adding the KAP format to the order will cost $4.98 + $1.99 or $6.97. The total price will be shown in the upper right corner.

SKYWAY BRIDGE REEF $6.97

IN STOCK

This site is directly south west of the old Sunshine Bridge approaches. The original two-lane bridge was completed in 1954. The main span of the northbound bridge was demolished in 1992 and the approaches for both old spans were made into the Skyway Fishing Pier State Park. It consists of concrete rubble lined up in rows put down in 1992. The water depths here are in the 12 - 22 foot range.

The KAP format contains the GPX file along with the custom contour chart for use on a PC using a full nautical navigation program named OpenCPN or on a smart phone or tablet like an iPad using a full nautical navigation app called SeaIQ.

The QDC format contains the GPX file along with the custom contour chart for use on a Garmin Depth sounder or Chartplotter compatible with Quickdraw Contours. (Please check your Garmin unit for compatibility with Quickdraw contours on the Garmin website.) If you have a Garmin Handheld GPS chose the KMZ format.

The PDF format contains the GPX file above with a PDF file containing pages of contour maps that can be printed out and brought with you. It contains a list of the various waypoints, their deploy dates and a brief description of the reef along with an overall view and individual zoomed in views of the reef or wreck. Each view contains a grid so you can determine the GPS location of any interesting point.

The KMZ format contains the GPX file along with the custom contour chart in viewable format on Google Earth or on a Garmin Handheld GPS unit.   (Please check your Garmin hand held GPS compatibility for Custom Maps on the Garmin website.

The AT5 format contains the GPX file along with the custom contour chart in viewable format directly on a Lowrance, Simrad or B&G chartplotter. (Please check your Lowrance, Simrad or B&G chartplotter compatibility for Custom Charts on the Lowrance, Simrad or B&G website.

I suggest you download the almost FREE Sarasota, Fisher Reef first and try it out on your unit.
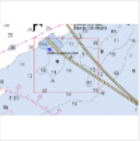
Also, on the right side you will see check boxes for your selection of the format you are purchasing.   You can order one or all of the different formats. Each of the graphic chart formats contain the GPX file.

Once you have selected the format you want, select *ADD TO CART.* The following screen will be displayed:

SHOPPING CART   PROCEED TO CHECKOUT

Skyway Bridge Reef was added to your shopping cart.

PRODUCT		PRICE	QTY	SUBTOTAL		DISCOUNT CODES	APPLY
	SKYWAY BRIDGE REEF	$6.97	1	$6.97	🗑		
	SKU: hlsw		Edit				
	Download:					SUBTOTAL	$6.97
	Skyway Bridge Reef in KAP Format					GRAND TOTAL EXCL. TAX	$6.97
	Skyway Bridge Reef in PDF Format					GRAND TOTAL INCL. TAX	$6.97

EMPTY CART   UPDATE SHOPPING CART   -OR-   CONTINUE SHOPPING   PROCEED TO CHECKOUT

If you want to select additional reef or wrecks select *CONTINUE SHOPPING*.   If you are finished, select PROCEED TO CHECKOUT.

If you select Proceed to Checkout you will go to the CHECKOUT screen.   As a new customer, select *REGISTER* to create an account and complete the requested information. Please be careful when entering your Email address as all purchases you make will result in an Email to you with a link allowing you to download what you have ordered. Please use a strong password and record it for future use. We have no access to your passwords and they are stored in an encrypted format. If you are a returning customer, enter your Email address and Password on the right and select *LOGIN*.

CHECKOUT

CHECKOUT METHOD

REGISTER TO CREATE AN ACCOUNT

Register and save time!
Register with us for future convenience:
Fast and easy check out
Easy access to your order history and status

[REGISTER]

RETURNING CUSTOMERS

Sign in to speed up your checkout process

Email Address *   * Required Fields

[   ]

Password *

[   ]

Forgot your password?

[LOGIN]

Enter your name, address and Email address in the fields provided.   Please be sure your Email address is correct, as any purchase you make will send a link to that address.

CHECKOUT

1	CHECKOUT METHOD	Edit
2	BILLING INFORMATION	

YOUR CHECKOUT PROGRESS
BILLING ADDRESS
PAYMENT METHOD

First Name *   * Required Fields
John

Middle Name/Initial
Q

Last Name *
Public

Company
[   ]

Email Address *
JQPublic@ABC.COM

Top section of the Register Form

Note: You must complete the ordering process to have your Email address and password registered.   If you back out before ordering and return later, you will have to re-enter your complete ordering information again.

When compete, press *LOGIN* or *CONTINUE* and you will be directed to the CHECKOUT PAYMENT screen.

Select your payment method and select *CONTINUE.*

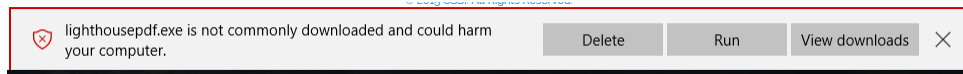Complete the forms with the requested payment information and press *CONTINUE.*

The last step is ORDER REVIEW where you can verify your order, billing address and payment method. When done, select PLACE ORDER .

In a few seconds you will receive an Email with a link back to the MY DOWNLOADABLE PRODUCTS screen. Select the blue "Reef XYZ" Format text (highlighted below) to start the download.

Note: You can download the files a maximum of three times.

ORDER #	DATE	TITLE		STATUS	REMAINING DOWNLOADS
100000007	5/3/2016	Cuda Ledge -	CUDA LEDGE PDF FORMAT	Available	1

You may receive a download message like the one below.   This is because the downloaded file is an .exe self-extracting zip file and for security reasons the operating system needs to ask you if you want to proceed. Select Run to continue. No software is installed, only files copied to the folder you select.

lighthousepdf.exe is not commonly downloaded and could harm your computer.   Delete   Run   View downloads   ✕

> **NOTE: We have set the price of Sarasota, Fisher Reef to $0.08 so you can download a full reef package in any or all the available formats and try them out.   Just follow all the instructions above to add it to your cart and checkout.   Sorry I have to charge 8¢ because PayPal cannot accept a $0 payment.**

> **NOTE: All downloadable files are self-extracting .exe files and must be run on a Windows based computer or a computer with Windows compatibility.   They cannot be downloaded directly to an Apple computer or tablet.   When downloading the .exe files, Microsoft will warn you that the files may be dangerous.   Select "Assume the Risk" to override the warning.**
>
> **When activated, the files will automatically un-Zip the various files and place them in a folder of your chose.   No programs will be run.**

## Reefsnwrecks Downloaded File Installation

After you select Run the downloaded file will execute and it will give you directions on what to do and suggests where to put the files.   The process simply unzips a few files and places them in the folder you specify.
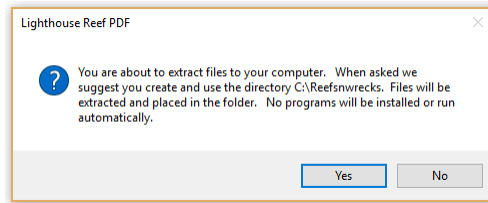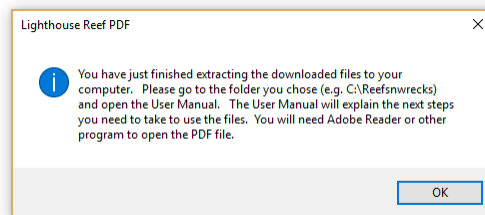

Please read and accept the license agreement.
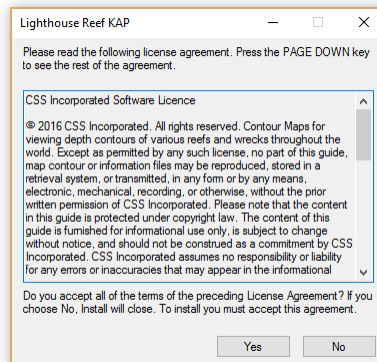
Browse to where you want to put the files.   We recommend a dedicated folder called C:\Reefsnwrecks and a folder for each county and reef.   For example, C:\Reefsnwrecks\Sarasota\Fisher.
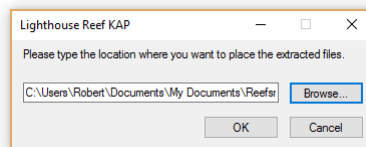
When you are complete, you will see this final screen.

It will copy the GPX_User_Manual.pdf and "Reef".gpx file which contains the detail waypoints for the reef to the folder you direct.   We recommend a folder named C:\ReefsnWrecks*County\Reef* but any folder will do. (Our instructions will assume C:\Reefsnwrecks) Just be consistent and place all downloads into the appropriate folder. If you have purchased contour charts in the past and are adding new ones, simply put the new ones in the existing folder.

12
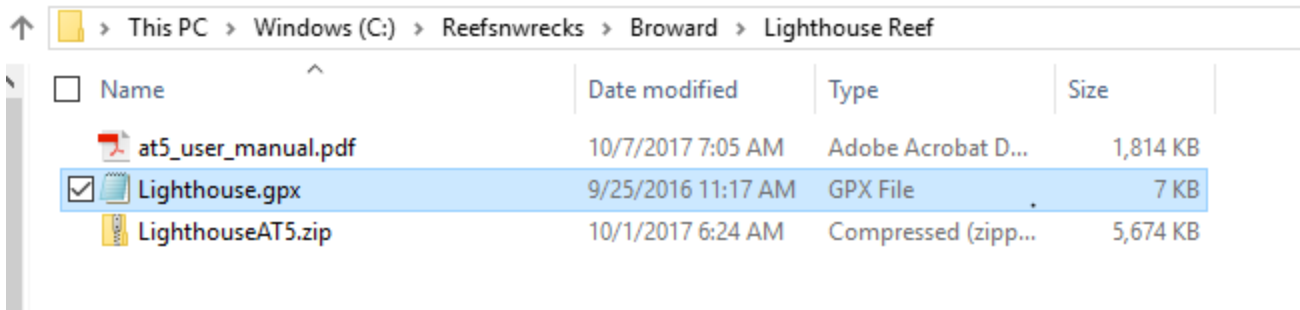
GPX File Installation

You have purchased the GPX Format of the custom contour charts and you will need to download the file contents into your GPS unit.

For example, Garmin uses a program called Homeport to read the GPX file and allow you to combine them with other GPX files then load a file onto a SD card.   You then take the SD card to your boat, insert the SD card and select "Download Waypoints from SD card".   If you are using the GPX file with one of the contour maps, please refer to that user manual for instructions on loading the GPX file into that program or App.

See appendix A for details on how to use Garmin Homeport.

Note: Be careful to back up or save your existing waypoints before loading new ones.

Please refer to your GPS User's manual on how to load a GPX file into your GPS.   With so many manufactures and models, it would be impossible for us to document every method used.

Sample Data

The Alan Fisher reef in Sarasota County is available for free and is useful to see and use the various formats that are available.   Download all the formats and try them out on your GPS unit, laptop computer, or tablet.

Waypoints

Each download also contains a .GPX file that has the waypoint that correspond to the callout on the maps.   Load the .GPX file into your GPS and you can navigate to those points shown on the printed maps.   Refer to your GPS user's manual to see how that is done. Typically by copying it to the GPX folder. Use the grid lines in the maps to locate any other point on the map and enter those coordinates manually into your GPS.

If you view or edit a waypoint, information will come up describing the point.   We have included a Name, and a brief description of the site, year of deployment and the exact latitude and longitude.
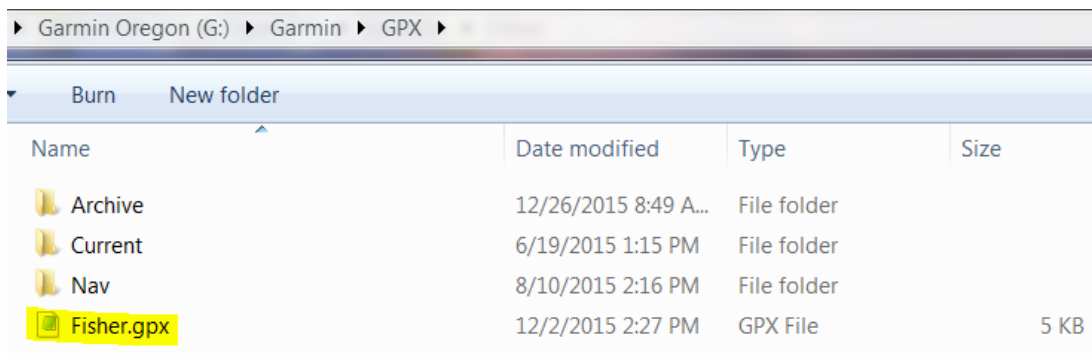
```
<?xml version="1.0" encoding="utf-8" ?>
<gpx version="1.1" creator="OpenCPN" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://www.topografix.com/GPX/1/1" xmlns:gpxx="http://www.garmin.com/xmlschemas/GpxExtensions/v3"
xsi:schemaLocation="http://www.topografix.com/GPX/1/1 http://www.topografix.com/GPX/1/1/gpx.xsd"
xmlns:opencpn="http://www.opencpn.org">
    <wpt lat="27.301666667" lon="-82.619333333">
        <time>1989-12-31T00:00:00Z</time>
        <name>FISHR1</name>
        <desc>Map #: 1; Deployed: 9/16/1980; Description: CONCRETE RUBBLE BOXES AND PILES; Depth: 31;
Relief:36.1</desc>
        <sym>xmred</sym>
        <type>WPT</type>
        <extensions>
            <opencpn:guid>01f90000-7f20-482a-af55-559c33820000</opencpn:guid>
            <opencpn:viz>1</opencpn:viz>
            <opencpn:viz_name>1</opencpn:viz_name>
        </extensions>
    </wpt>
```

Example of a One Waypoint GPX File

Getting Started

We strongly urge you to read the User manual for your GPS Chart plotter and become familiar with all the other features of your unit.

Getting Help

Any support questions or problems associated with your GPS Chart plotter should be directed to their support team.

Updates and New Charts

Thank you for your purchase. Check back to the web site often as we are adding new areas and natural ledges to our inventory all the time. Remember, adding new charts are as simple as copying then to your Reefsnwrecks folder and unzipping them to your SD card.

Any questions about the Contour Maps should be directed to Bob@reefsnwrecks.com.

NOTE: We have set the price of Sarasota, Alan Fisher Reef to $0.08 so you can download a full reef package in any or all the available formats and try them out.   Just follow all the instructions above to add it to your cart.

Sorry I have to charge 8₵ because PayPal cannot accept a $0 payment.

**Appendix A – Garmin Homeport**

Appendix A – Garmin Homeport

Homeport is a PC based program from Garmin that allows you to see the exact same navigation charts as you will see on your Garmin GPS.   The program allows you to insert an SD card which has a copy of the charts that are in your GPS unit and allows you to add waypoints and create routes.   After they are created on the PC, you can save them to your computer hard drive and load them into a SD card. The SD card is then brought to your boat, inserted into the SD card slot of your GPS, select a few functions and it simply loads the file into your GPS.   By using the computer with a full keyboard, mouse and large screen sitting at a comfortable table makes entering data much simpler.

To load GPX files into your GPS using Homeport follow the following steps:

1. To get HomePort, go to https://buy.garmin.com/en-US/US/prod64242.html
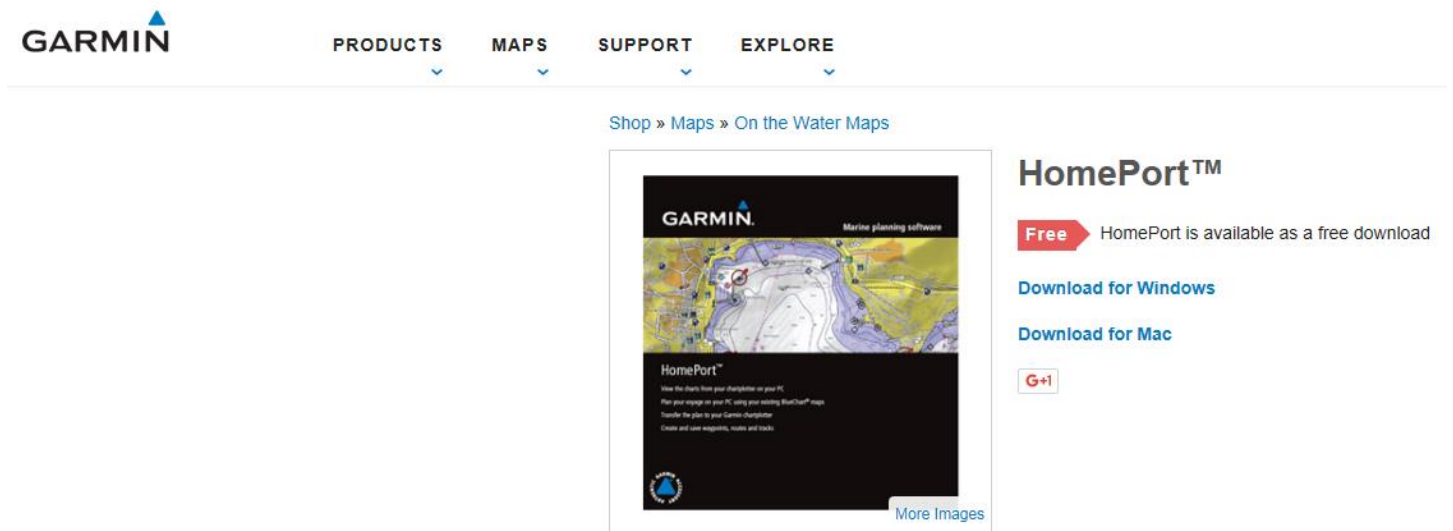
2. Download the software and install it on your computer.

3. Purchase a 4GB to 32GB SD card or a microSD card and adapter for use with your computer and GPS unit. (microSD to SD and/or SD to USB)

4. In upper left corner highlight My Collection.   Select FILE > NEW > LIST FOLDER. A folder with the name New Folder will be created.
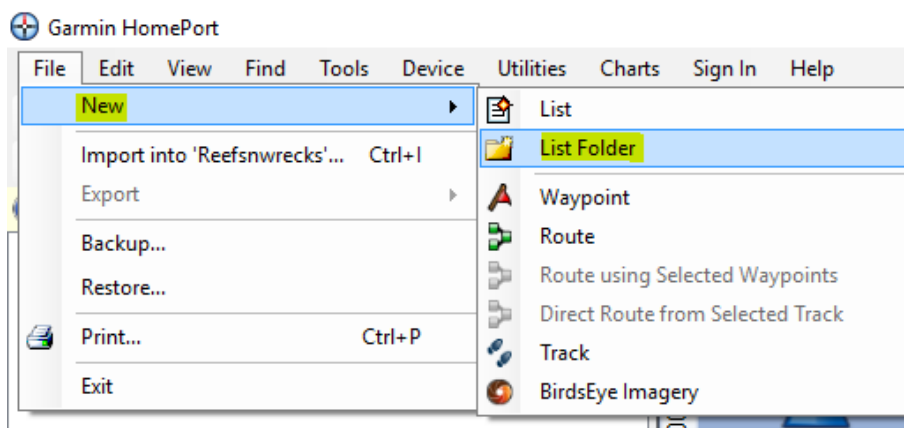
5. While highlighted, change the name to Reefsnwrecks.   If not highlighted, click twice slowly to highlight text then change name.
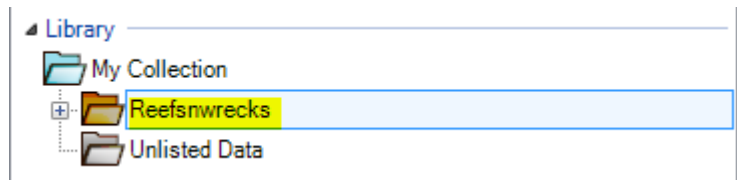
6. Next we want to create county lists under Reefsnwrecks.   Highlight Reefsnwrecks and select FILE > NEW > LIST. A New List will be created.
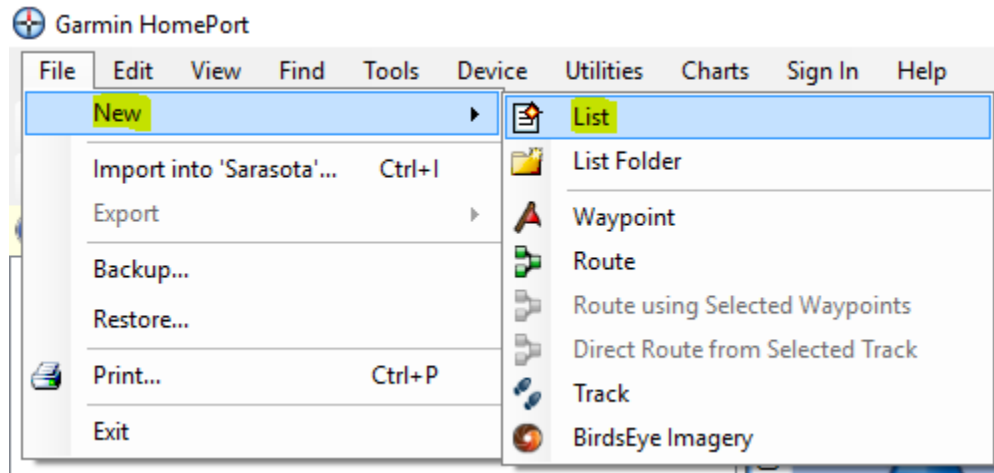

7. While highlighted, change the name to the County where the reefs are. For example "Sarasota". If not highlighted, select the list and click twice slowly to highlight text then change the name.
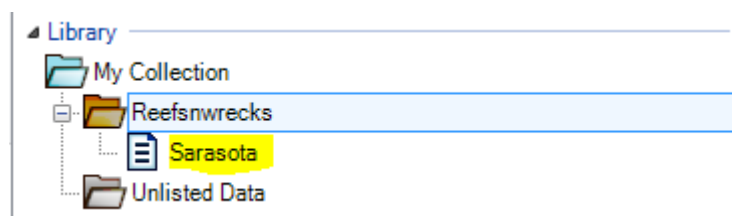
8. Now we want to import the GPX files that you downloaded from the Reefsnwrecks website. Go to the folder which you saved the files and run the reef.exe file, if you have not already done so and extract the <reef>.gpx file. Go to HomePort, Highlight the county, (e.g. Sarasota) and select File > Import into <County>, browse to the <reef>.gpx file, select it and press Open. You should see the waypoint for the reef listed in the lower left corner of the screen.
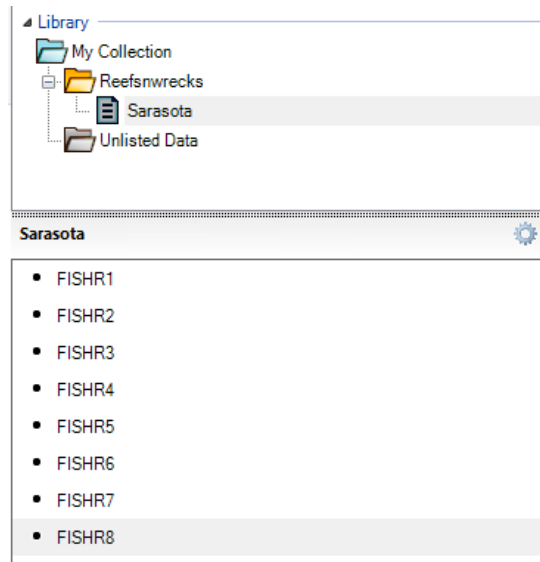

9. Repeat this last step for all downloaded GPX files that are within this county.
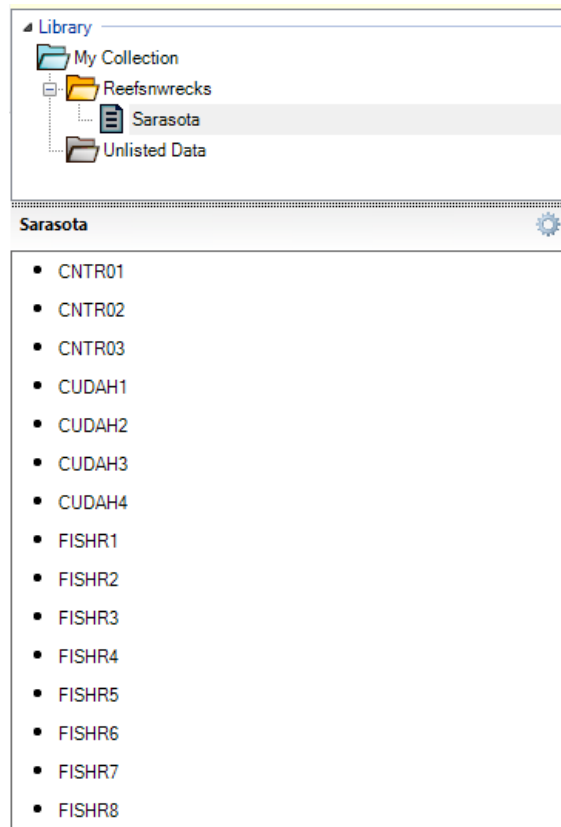
10. If you have downloaded multiple counties, create another List by selecting Reefsnwrecks and selecting File > New > List. Name the new list as before. Import waypoints into that list like before.
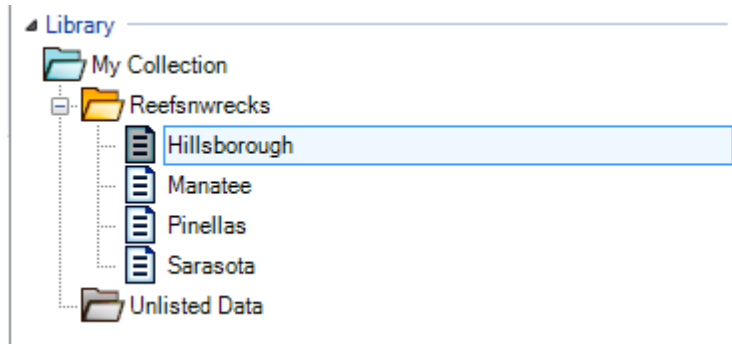

11. If you want to change the waypoint symbol, select the waypoints you want to change by selecting the first waypoint then pressing and holding Shift then selecting the last waypoint.   This will select the first, last and all the waypoints in the middle. Right mouse click any waypoint selected and select Open. The Name field should display ## waypoints selected. In the Display Mode box select the Pull down menu and select a symbol. Select a unique symbol so you will know that these are exact, spot on waypoints as opposed to unconfirmed waypoints.
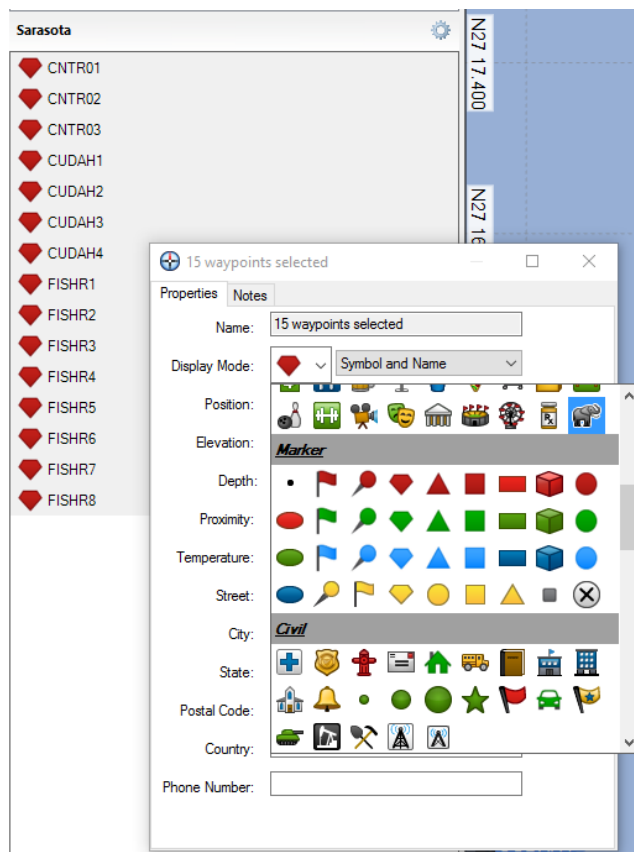
12. Remove the SD card from your GPS and plug it into your computer. If your GPS uses a micro-SD card you will need a micro to regular SD adapter (should have come with the micro-SD card). If you do not have a built in SD slot in your computer, you will need to purchase a USB to SD card adapter.   Once you have inserted your SD card into the computer, HomePort should sense it and display it under Devices in the left column.
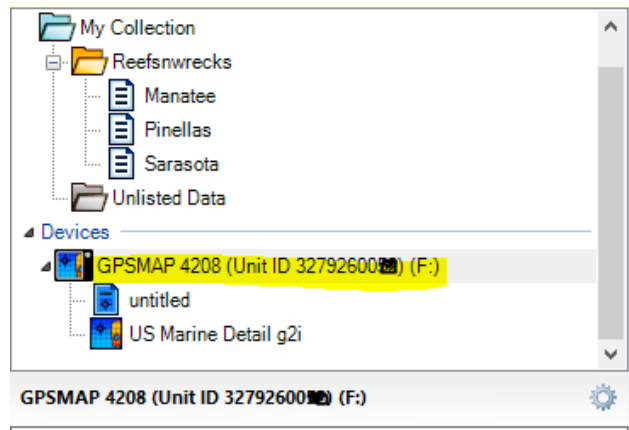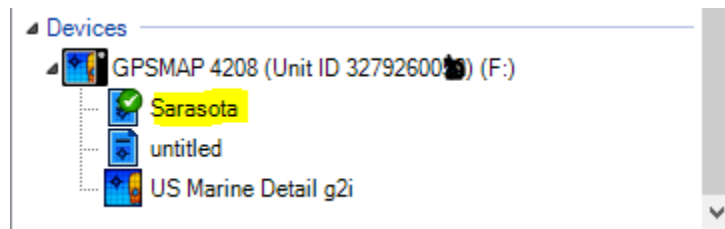

13. To transfer the waypoints to the SD card select a list, e.g. Sarasota, and right click you mouse and select Send To..., select your SD card under Devices and press OK.
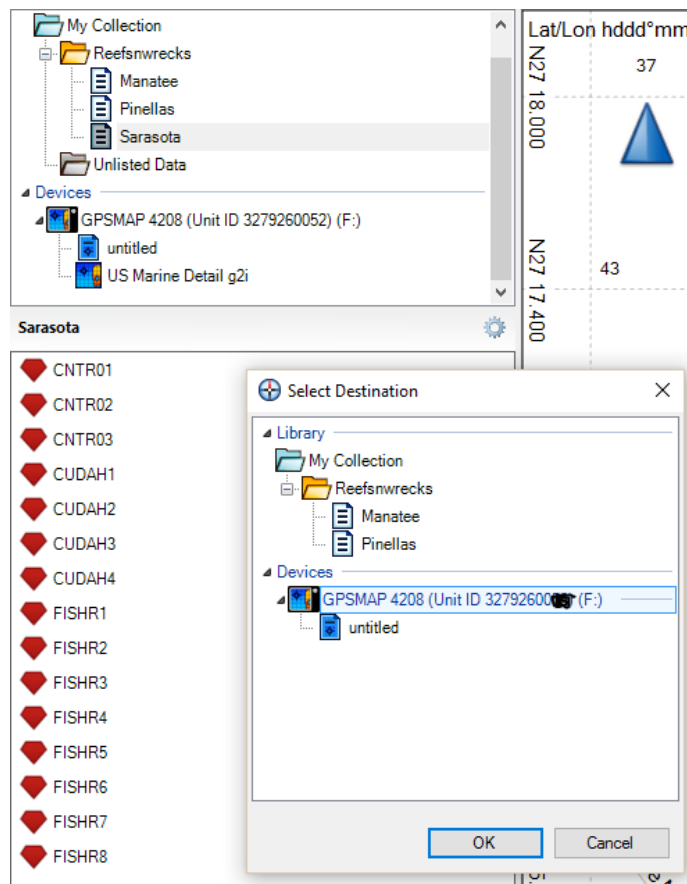
14. Leave the default selection of Create a new ADM file with name: <County> e.g. Sarasota.
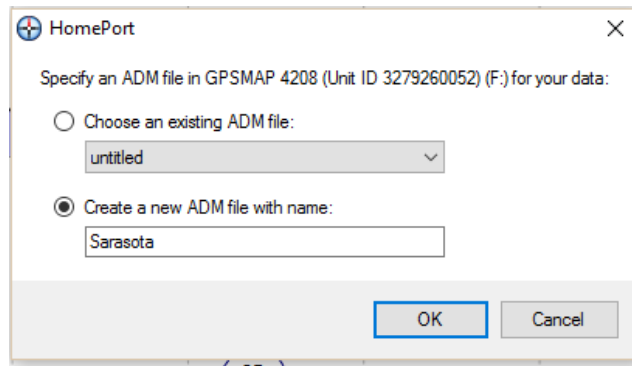
15. Press OK.   You will see a list created on your SD card and the waypoints transferred.

16. Remove the SD card from the computer and insert it into your GPS unit. The card should be automatically sensed and the Data manager screen should come up. Backup the waypoints in your GPS if you want to save them and then follow the waypoint loading instructions from your user manual. e.g. a GPSMap had the following instructions.

Viewing User Data
To view user data from the Home screen, select **Information** > **User Data**.

Waypoints—view a list of all saved waypoints (page 25).

Routes—view a list of saved routes (page 27).

Tracks—view a list of saved tracks.

Data Transfer—transfer waypoints, routes, and tracks to and from an SD card or network.

To transfer data to or from an SD card:
1. Insert an SD card into the SD card slot on the front of the unit.
2. From the Home screen, select Information > User Data > Data Transfer > Card.
   Complete one of the following:
   • Select **Save To Card** to save waypoints, routes, and tracks to the SD card.
   • Select **Merge From Card** to transfer data from the SD card to the unit and combine it with existing user data.
   • Select **Replace From Card** to overwrite items on your unit.

17. Select each list you want to load one at a time. To load the first list you might use **Replace** From Card that will delete all waypoints and load the new set. To load the second to last list you should select **Merge** From Card so the additional waypoint are <u>added</u> to the existing waypoints without deleting any.

18. In addition, you can load our KMZ Custom Map format into Homeport and see our contour maps as you would see them on your hand held GPS units.   Unfortunately, Garmin has chosen not to support Custom Maps on their line of Marine Depth sounders.   However, by using Homeport, you can view our custom contour map and set additional waypoint on points that you want to explore.   Then transfer all the waypoints to your Marine Depth sounder.