

## 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 Maps

For artificial reefs, look for concentric circular contour lines with decreasing depths and color changes per the scale on the right side. These are the structures put down to create the artificial reefs. For ledges and natural reefs look for long closely spaced lines that indicate the presence of a ledge or reef line. We continue to plot ledges and natural reefs until they run out. For example, the Cuda Ledge off of Sarasota is over a mile and a half long. If you move your GPS cursor over a contour chart you will see the exact GPS latitude (North-South) and GPS longitude (East-West) coordinates. A minute of latitude is 6,000 ft so 0.1 minute is 600 feet and 0.01 minute is 60 feet. If you are out on the water and over a reef or wreck, your boats position will be shown over the contour chart.

## 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 <u>Bob@reefsnwrecks.com</u> and we will promptly return your Email. Checkout our free reef offers for the Alan Fisher reef later in this manual.

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## About the PDF Format

The charts provided in the PDF format are intended to be downloaded and printed by the user. Each file contains a cover page, index, list of what was deployed along with the date of deployment and resulting profile. It also contains the distance and heading from at least one inlet or reference point. After printing, I recommend putting the printout into a plastic sleeve and place it into a small binder like the one shown below. This keeps them together and prevent them from blowing away. Put the first printed page in the front pocket as the book cover. Put the rest of the pages back-to-back in the clear inserts inside the book. Others have used a laminating machine to seal the paper permanently and have even taken the chart with them under water while diving. Print on both sides of one page and use a pressure type clip to secure to your BC. You can also punch a hole in the laminate, but make sure the punched hole is clear of any paper as it will leak water into the paper edge that is exposed.



## 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 the 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 as well as adding reefs and wrecks on the east coast of Florida. Check back often to the website, as we will be adding additional reefs and wrecks on a weekly basis.

## **Contributions**

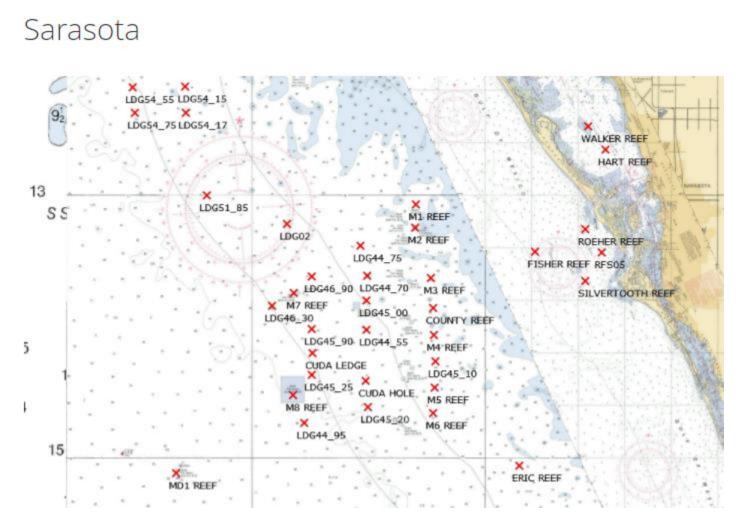
If you have a boat, good quality GPS/Depth sounder and are interested in joining our data collection team, please contact us at <u>Bob@ReefsnWrecks.com</u>. If you have a favorite area that you would like scanned, let us know and you will receive the completed scan in the format of your choice for free 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 maps for. In the following examples I have chosen the SARASOTA tab (yellow highlighted)

								WELCOME TO REEFSN	IWRECKS.CO
ReefNW	recks.com								CART
								Search entire store here	۹
MANATEE	SARASOTA	PINELLES	HILLSBOUGH	LEE	CHARLOTTE	MONROE	DADE		

When that screen comes up, you will see an overall map of the Sarasota 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.

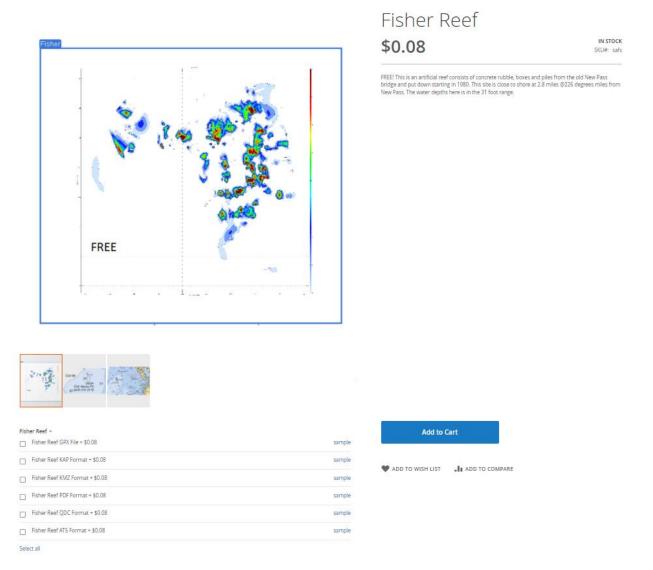


Sort By Product Name 🗸 🕇

For example if you selected Skyway Reef, you will see the following screen:

	Fisher Reef
72170	\$0.08
FREE	Add to Cart  The set of the set o

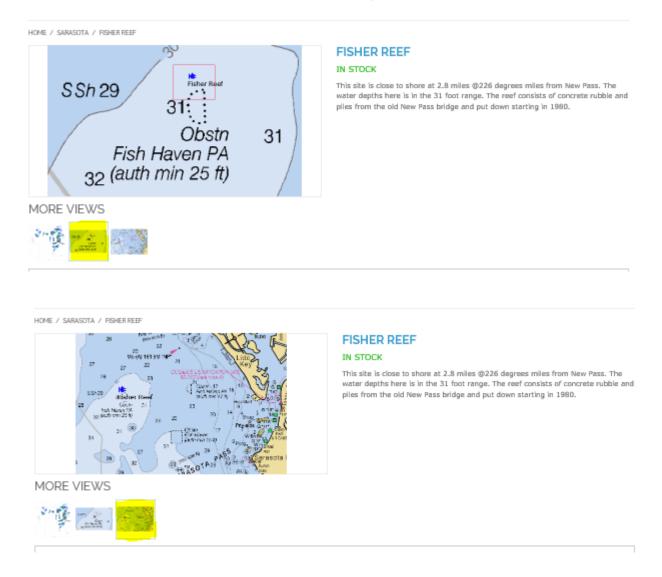
If you left mouse click on the reef chart or the reef name it will take you to the format selection and Add to cart page.



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. The description will tell you the distance off shore and bearing from the nearest inlet or landmark.

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map coverage and a third view zoomed out so you can get a better idea where the reef or wreck is located. The description will always tell you the distance off shore and bearing from the nearest inlet or landmark.



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, the typical depth in that area and the approximate area shown. 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 formats 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 KMZ 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



#### 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.

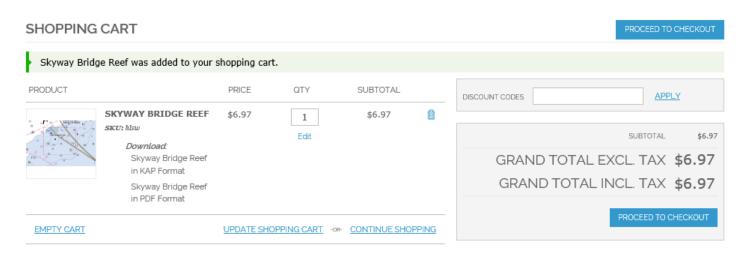
The KMZ format contains the GPX file along with the custom contour chart in viewable format on Google Earth or on a Garmin Handheld GPS unit. (Please check your Garmin hand held GPS compatibility for Custom Maps on the Garmin website.

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 formats contain the GPX file.

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



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*.

RETURNING CUSTOMERS Sign in to speed up your checkout process Email Address *	
Email Address *	
	* Required Fields
Password *	
Forgot your password?	
LOGIN	
	YOUR CHECKOUT PROG
Edit	BILLING ADDRESS PAYMENT METHOD
* Required Fields	
	Forgot your password? LOGIN Edit

## 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 screen.

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## Select your payment method and select CONTINUE.

CHECKOUT	YOUR CHECKOUT PROGRESS BILLING ADDRESS   CHANGE
1 CHECKOUT METHOD Edit	John Q Public 55 Main Street
2 BILLING INFORMATION Edit	55 Jaan Street Anytown, Florida, 34888 United States
3 PAYMENT INFORMATION	T: 941-555-1212
<ul> <li>What is PayPal?</li> <li>You will be redirected to the PayPal website when you place an order.</li> <li>Credit Card (saved)</li> </ul>	PAYMENT METHOD
CONTINUE « Back	
4 ORDER REVIEW	

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.

ECKOUT		
CHECKOUT METHOD		
BILLING INFORMATION		
PAYMENT INFORMATION		
ORDER REVIEW		
PRODUCT	PRICE QTY	SUBTOTA
SKYWAY BRIDGE REEF <i>Download</i> : Skyway Bridge Reef in KAP Format Skyway Bridge Reef in PDF Format	\$6.97 i	\$6.9
	Subtotal	\$6.93
	Grand Total Excl. Tax	\$6.97
	Grand Total Incl. Tax	\$6.97

#### YOUR CHECKOUT PROGRESS

BILLING ADDRESS | CHANGE

John Q Public 55 Main Street Anytown, Florida, 34888 United States T: 941-555-1212

#### PAYMENT METHOD | CHANGE

Credit Card (saved) Credit Card Type: MasterCard Credit Card Number: xxxx-5642 Name on the Card: John Q Public

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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 - <mark>CUDA LEDGE PDF FORMAT</mark>	Available	1

You may receive a download message like the one below. This is because the downloaded file is an .exe selfextracting 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.



NOTE: We have set the price of Sarasota, Alan Fisher Reef to \$0.00 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 for free without the need for any payment information.

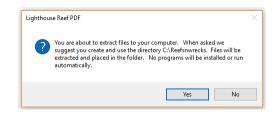
Sorry I have to charge 8¢ because PayPal cannot accept a \$0 payment.

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 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.

Lighthouse Reef KAP —	×
Please read the following license agreement. Press the PAGE DOWN to see the rest of the agreement.	key
CSS Incorporated Software Licence	^
© 2016 CSS Incorporated. All rights reserved. Contour Maps for viewing depth contours of various reefs and wrecks throughout the world. Except as permitted by any such license, no part of this guide, map contour or information files may be reproduced, stored in a retrieval system, or transmitted, in any form oby any means, electonic, mechanical, recording, or otherwise, without the prior written permission of CSS Incorporated. Prease note that the content in this guide is protected under copyright law. The content of this guide is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by CSS Incorporated. CSS Incorporated assumes on responsibility or liability for any errors or inaccuracies that may appear in the informational	~
Do you accept all of the terms of the preceding License Agreement? If choose No, Install will close. To install you must accept this agreement	
Yes No	

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.

Lighthouse Reef KAP	-		×
Please type the location where you wa	nt to place the e	extracted f	les.
C:\Users\Robert\Documents\My Doc	uments\Reefsr	Brow	se
	ОК	Can	cel

When you are complete, you will see this final screen.

Lighthou	se Reef PDF	×
0	You have just finished extracting the downloaded files to your computer. Please go to the folder you chose (e.g. C:\Reefsnwrecks) and open the User Manual. The User Manual will explain the next steps you need to take to use the files. You will need Adobe Reader or other program to open the PDF file.	
	ОК	

It will copy the PDF\_User\_Manual.pdf, "Reef".PDF which contains the custom contour maps and "Reef".gpx file which contain all the waypoint for that reef to the folder you direct. We recommend a folder named C:\ReefnWrecks but any folder will do. Just be consistent and place all downloads into the same folder. You should see a PDF and GPX files. If you have purchased contour charts in the past and are adding new ones, simply put the new ones in the existing folder.

This PC > Windows (C:) > Reefsnwreck	s > Broward > Light	thouse Reef	
Name ^	Date modified	Туре	Size
🔁 at5_user_manual.pdf	10/7/2017 7:05 AM	Adobe Acrobat D	1,814 KB
Lighthouse.gpx	9/25/2016 11:17 AM	GPX File	7 KB
LighthouseAT5.zip	10/1/2017 6:24 AM	Compressed (zipp	5,674 KB

# Adobe Acrobat Installation (PDF Format)

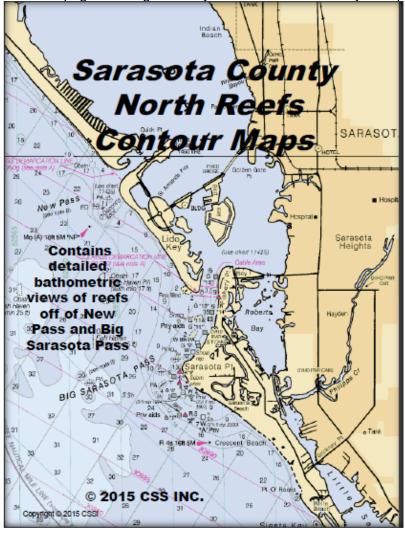
You have purchased the PDF Format of the custom contour charts and you will need to verify you have a PDF file reader. Some of the new Windows operating systems may come with a built in PDF reader. If yours did not, you can download a free reader from <a href="https://get.adobe.com/reader/">https://get.adobe.com/reader/</a>. There are some Optional offers in the center of the screen that you may want to un-check. At the bottom right side of the page select *Install now*. When the installation is complete, simply double click on the PDF files to open them.

Users usually print them out and put the print outs in a plastic sleeve to protect them from wet hands and rain. Each reef will have a cover page, index, list of waypoints and material that was deposited there. (If artificial reef.)

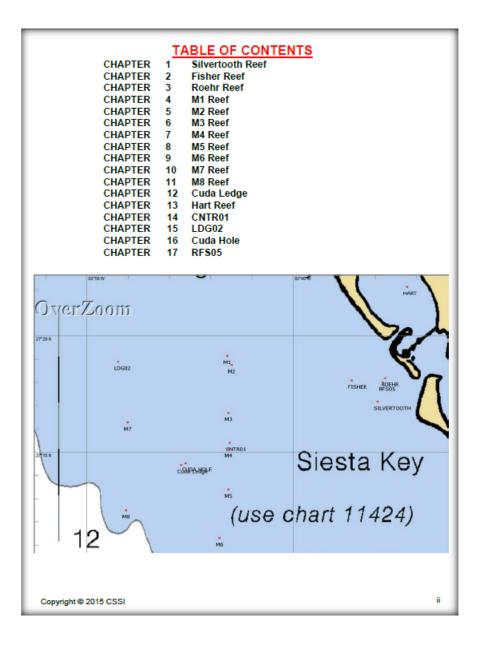
The remaining pages contain a view of the whole reef and additional zoomed in shots of various interesting parts of the reef.

# Sample Data

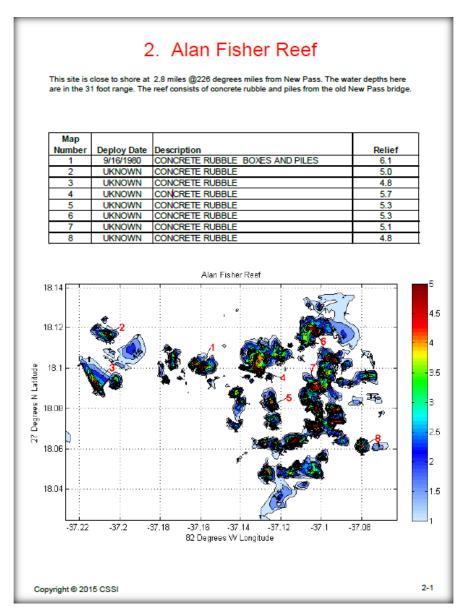
The front pages are organized by counties. This allows you to print out and produce different county "books".



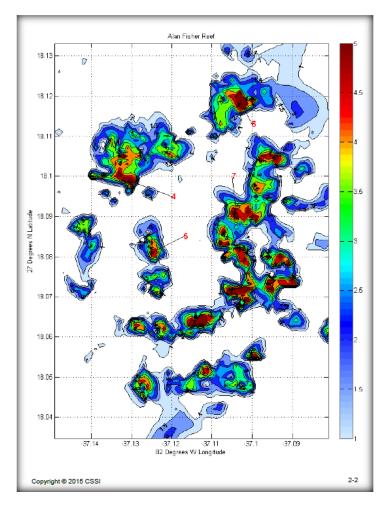
The next page contains an index for the "book" and contains the reefs that are available in that area. It also contains a map showing the relative locations of the reefs so you can see which ones are near you.



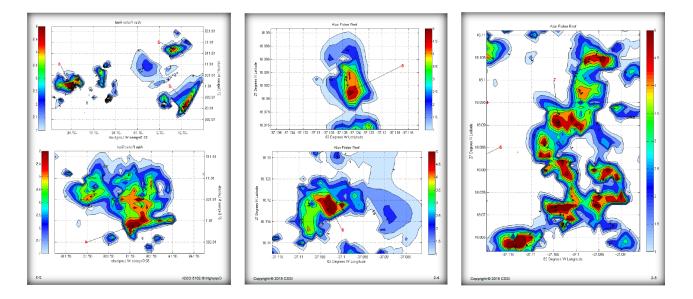
The next page of the PDF format looks like this below, with a general description of the reef and a list of deployed material with date, Map Number/Callout and the relief or height off the bottom of the highest point of each pile and an overall view of the reef.



The next couple of pages shows details of interesting parts of the reef. They zoom in on each of the waypoints to give you a better view of what is there.



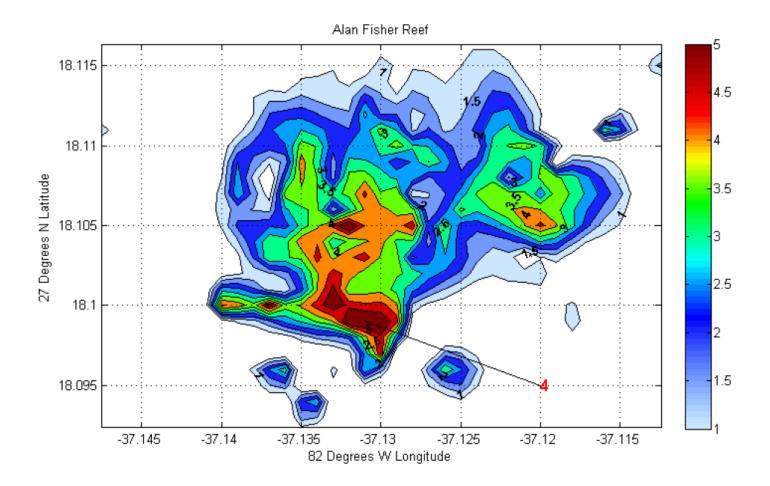
Subsequent pages show additional pages of zoomed in areas of the reef. The additional GPX file that is included has all the GPS waypoint that are shown on the maps.



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Note that the name of the reef is on the top, latitude is the vertical grid on the left, longitude is the horizontal grid on the bottom and the depth color scale is on the right.

So for example #4 below is waypoint FISHR4 at 27 degrees 18.1 minutes North latitude, 82 degrees 37.13 minutes West longitude and consist of concrete rubble which stands a maximum of 5.3 feet off the bottom, is shown in red, and was put down in the 1980's.



## <u>Waypoints</u>

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.

We strongly urge you to read the manual that came with your GPS unit and the company's website for help with viewing waypoints.

Burn New folder			
Name	Date modified	Туре	Size
👢 Archive	12/26/2015 8:49 A	File folder	
👢 Current	6/19/2015 1:15 PM	File folder	
📕 Nav	8/10/2015 2:16 PM	File folder	
Fisher.gpx	12/2/2015 2:27 PM	GPX File	5 KE
version="1.0" encoding="utf- version="1.1" creator="0penCP "http://www.topografix.com/G	8" ?> N" xmlns:xsi="http://www.w3.org/2 PX/1/1" xmlns:gpxx="http://www.ga ografix.com/GPX/1/1 http://www.to	2001/XMLSchema-	instance"

## **Getting Help**

Any support questions or problems associated with your GPS or your PC should be directed to their support groups for support.

## **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 downloading then, extracting them to your Reefsnwrecks folder, opening them in a PDF file reader on your PC and printing them out.