Bahamas Spring Season Fishing Forecast for 2025

TIME TO FISH THE BAHAMAS

By: Matthew Upton

Introduction

For the past 23 years ROFFS™ has been observing and forecasting the overall ocean and fishing conditions during the spring Bahamas Fishing Season from March through early June. The hypothesis for forecasting the seasonal marlin fishing action stems from the location of the darker blue and often warmer water that occurs from the Cat Island – San Salvador Island area and south to southeast of these islands where it is presumed that the marlin concentrate before, during and after spawning. We have been calling this water "blue marlin water" in our analyses. From satellite data, we can identify this water based on its ocean color/chlorophyll signature and sea surface temperature (SST) characteristics. Our hypothesis and experience have shown that the marlin and other pelagic species (such as tuna, dolphin and wahoo) are associated with this water and the more "blue marlin water" that exists in the Abaco Islands and Eleuthera Island areas early in the season, the greater the relative abundance of marlin in these areas closer to the islands.

We have also observed an association between the "blue marlin water" and the tuna and wahoo action in the Bahamas, northward along the western side of the Gulf Stream between Jacksonville, Florida and northward towards Cape Hatteras, North Carolina. We do observe evidence that when more "blue marlin water" passes north and northwest of Abaco to the eastern side of the Gulf Stream earlier in the season that a certain unknown proportion of the migratory fish move to the western side of the Gulf Stream and north. This brings more fish to the coastal fisheries at the edges of the Gulf Stream water throughout the spring to early summer season from northeast Florida to North Carolina.

Based on our observations in the Bahamas from Eleuthera to the Abacos over the last 38 years, it appears that excellent fishing action occurs within the Bahamas areas when there is a substantial volume of the "blue marlin water" pushing over the 100-500 fathom (600-3000 feet) and shallower ledges and good structure along the eastern side of Cat Island, Eleuthera and the Abacos. Relatively favorable fishing seasons occur when this water only occurs over the 500-1000 fathom depths, but does not reach the 100-500 fathom or shallower depths. Mediocre to poor years occur when there is a lack of this water over these areas or the "blue marlin water" is way offshore and pushes more north of the Abacos instead of west to northwest. However, in these cases, short pulses of this water bring fish into these areas regardless. Unless there is a sustainable flow of the water into these regions, the catch rates remain below average to average through the season. It is also important to understand that good fishing action on a daily basis is linked to the water mass boundaries created by these currents and eddies, where they are stable for consecutive days over good bottom structure and ledges and where the water is pushing in a favorable inshore direction over good structure toward the islands. These features, that have remained favorable for multiple days, concentrate the baitfish and draw bigger fish into these areas.

The hypotheses and observations are also based on our experience using hourly and daily satellite data of the ocean conditions derived by ROFFS™ (www.roffs.com), catch reports provided by a variety of sources for the past 38 years and information derived from other sources of oceanographic data. We mainly use infrared (IR) satellite data to observe the sea surface temperature (SST) and the ocean color/chlorophyll data for indices of phytoplankton (chlorophyll), water clarity, and colorized dissolved organic material (CDOM) that are received from a variety of data sources including NASA, NOAA, and the European Space Agency (ESA) satellites.

Background and Data for 2025

Although we have learned that the favorable oceanographic conditions develop from the presence or absence of the "blue marlin water" during the main Bahamas fishing season (April-June), we continue to prepare the annual forecast from data around mid-to-late-March when tournament season starts up and more flock to the Bahamas for spring fishing. This allows us insight into the conditions prior to the spring season and understand the ongoing fishing success starting in March and continuing to June. We prefer to use real-time observations and have learned that evaluating the preseason conditions in February and March provides insight into future seasonal trends. We rely on real time satellite data, but also consult climate models. One indication is the SST in the core of the Gulf Stream off Miami and the SST of the Bahamas "blue marlin water" east of Cat Island to east of Long Island. Because we started our forecasting studies during the first week or two of March in 2003 we have continued our time series using that same time period to directly compare each year.

The ROFFS™ 23 year mean SST for the core of the Gulf Stream off Miami is 78.8°F during our standard mid-March measurement period. This year the SST was approximately 79.5°F in the core of the Gulf Stream off of Miami on March 18-20 (2025), which is about the same as it was last year (2024) and about 1°F cooler than 2023 and just slightly warmer than the 23-year mean. While we have not been recording the SST of the Bahamas "blue marlin" water offshore of Cat Island to Long Island as long, the 18 year mean (2008 – 2025) SST for the warmer water east of Cat Island area is 77.2°F. This year the SST of the "blue marlin water" east of Cat Island/Long Island was about 78.2°F during the standard mid-March time period and about 1.5°F warmer than last year, and about 1.0°F warmer than the mean and about the same as it was in 2023 and 2022. Overall, the observations this March indicates that the SST is warmer overall and the Bahamas "blue marlin water" is overall warmer than the previous year which is considered normal to slightly warmer than normal conditions for this area. This suggests a more "normal" arrival of the higher numbers of billfish, tuna and wahoo action in this region and perhaps a slightly earlier arrival of the higher populations of fish compared to last year.

Furthermore, we continue to monitor climate variability and ocean-wide circulation and consider other indices such as the North Atlantic Oscillation (NAO) and the Atlantic Multidecadal Oscillation (AMO). The NAO is the dominant mode of climate and seasonal variability in the North Atlantic region ranging from central North America to Europe and much into north Asia. The NAO is a large-scale variation in atmospheric mass between the subtropical high and the polar low. The corresponding index varies from year to year and month to month, but also exhibits a tendency to remain in one

phase for intervals lasting several years. The NAO is a climatic phenomenon in the North Atlantic Ocean defined as the difference of atmospheric pressure at sea level between the Icelandic low and the Azores high. Through east-west oscillation motions of the Icelandic low and the Azores high, it controls the strength and direction of westerly winds, currents, and storm tracks across the North Atlantic Ocean. It appears to be one of the most important manifestations of climate fluctuations in the North Atlantic (https://www.ncei.noaa.gov/access/monitoring/nao/). This year (2025) the NAO index for January is negative and lower than last year (-0.52) and higher in February than last year (1.60) and considered higher than normal in February but lower than normal in January. Typically the NAO is more important for driving the west to east winds (westerly's) from 30°N latitude and north. Higher NAO index values or an increase in NAO index suggests stronger wind and more cooling so we expect both the atmospheric temperature and SST to be cooler than normal and windier this next month and into the spring. This lines up with the cooler than normal winter we had (especially up north), and the higher number of fronts observed this winter.

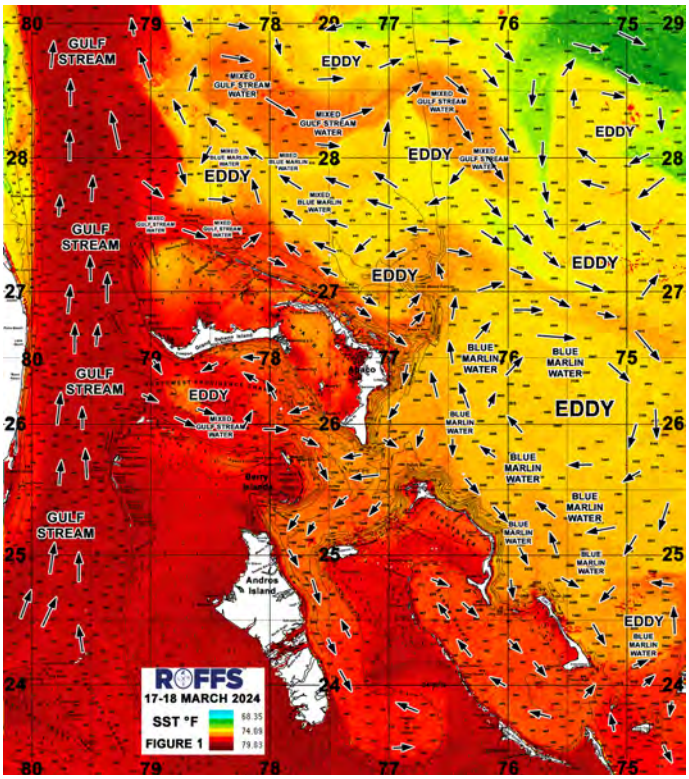
The Atlantic Multi-decadal Oscillation (AMO) has been identified as a coherent mode of natural variability occurring in the North Atlantic Ocean with an estimated period of nearly 100+ years. It is based upon the average anomalies of sea surface temperatures (SST) in the North Atlantic basin, typically over 0°-80°N latitude. (https://climatedataguide.ucar.edu/climate-data/atlantic-multi-decadal-oscillation-amo). The AMO Index for January and February 2025 is approximately 0.98 and 0.86 respectfully which is about the same as last year suggesting higher SST anomalies and a positive AMO. We have learned that the current positive trend in these indices suggest a decrease in speeds of the North Atlantic Ocean Circulation is occurring. This includes a possible slow decrease in current speeds of the Gulf Stream system. Also, a positive AMO is usually associated with a potential increase in the number of tropical storms that mature into hurricanes because the overall North Atlantic Ocean SST is higher. This does not take into account the wind shear variability and other aspects of tropical storm genesis. For easy to understand answers to frequently asked questions about the AMO see http://www.aoml.noaa.gov/phod/amo_faq.php#faq_2.

Regarding El Niño we have yet to observe any direct relationship between El Niño – La Niña and the Southern Oscillation (ENSO) and the oceanographic conditions in the Bahamas area. Currently we are in a La Niña phase. We have been in a La Niña stage for the better part of the past seven months suggesting an increase number of tropical storms in the North Atlantic Basin, which does agree with the current AMO readings of larger anomalies. However, it is forecasted that we are moving toward an ENSO-neutral stage this summer this year which could reduce the number of tropical storms later this summer (https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf).

Nowcast and Forecast Analysis

In this section we want to discuss and present the current oceanographic conditions (Figure 3 and Figure 4) and compare them to last years conditions (Figure 1 and 2) and what it means for this year's prime fishing season. For clarification purposes Figures 1 and 3 were derived from a variety of NASA, NOAA, ESA, and JPSS satellite SST sensors during the mid-March period and Figures 2

and 4 were derived from the VIIRS, Sentinel 3, and NASA MODIS Aqua ocean color/chlorophyll imagery during the same mid-March time period. We also try to stay relatively consistent with our color palettes through the years to make it easier to directly compare the conditions by satellite signature.



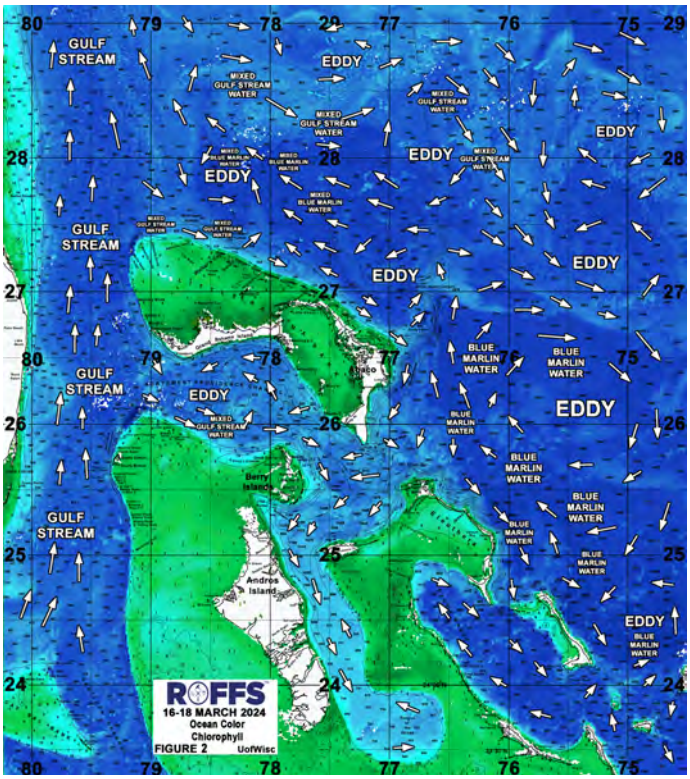


***Figure 1**: Last years conditions were derived from a variety of infrared sensors to get SST from NASA, NOAA, and ESA's Sentinel 3 satellites during March 17-18, 2024 and **Figure 2**: Derived from the ocean color/chlorophyll imagery during March 16-18, 2024 from the ESA Sentinel 3 satellites, VIIRS sensors on SNPP satellite in combination with the Aqua and Terra sensor on the MODIS satellites provided by the University of Wisconsin SSEC. We consider this an image pair.*

In both instances, we could not use single and same day imagery for the SST and ocean color data due to cloud cover interference, so we used a combination of imagery and the ROFFS™ cloud reduction techniques to produce these relatively cloud-free images. For comparison purposes these images were constructed during the same time period so are considered equal image pair for the purposes of this discussion. While these provide a visualization of the mid-March conditions, they also provide examples of how the eddy features, or lack of eddy features, and the water circulation are pulling the "blue marlin water" through the Bahamas. This is important for understanding the dynamics of the region. Both images for each year have the same arrows, eddy and "blue marlin water" labeling. The flow of the water was derived from our ROFFS™ sequential image analysis of Lagrangian coherent features where we study several days of satellite imagery to follow the signature water masses and their motion. An example of this years SST satellite infrared imagery can be found on the ROFFS™ YouTube site at (https://www.youtube.com/watch?v=mt9Av3GAwmA)

showing the flow of the water around the Bahamas region during the last two months, where the darker grey water represents the warmer water and white represents clouds.

Every year is different, and this year is no exception as the waters around the Bahamas look different than last year and the year before. Similar to last year, but even more so, is the lack of higher amounts of darker "blue marlin" water that has made its way north of Abaco and to the Gulf Stream. This lack of large abundances of "blue marlin water" in the north indicates that there is likely less of the main marlin, mahi and tuna population in the middle to northern Bahamas region and perhaps a later than normal arrival of the majority of these species in the northern Bahamas and further north along the coast of Florida, Georgia, and South Carolina. HOWEVER, in the southern Abaco and eastern Bahamas down to Cat and Long Island there does appear to be a larger amount of "blue marlin water" that has just started to show up within the last 2-3 weeks in larger amounts starting to produce some GOOD conditions east and southeast of Abaco to northeast Eleuthera and southeast east of Cat Island.

The main obvious difference between this year and last year is that the water is 1.5-2.0 degrees warmer in most places offshore, especially to the east of Abaco and east off of Eleuthera and Cat Island. The "blue marlin water" overall is warmer than last year, likely contributing to the already good billfish action (white marlin, sailfish and blue marlin) in the Abacos in early-to-mid March. In fact, several boats have caught or had 5-8 bites a day recently, but less boats have had good marlin fishing further south (but also less effort). This could be the first good wave of higher amounts of billfish into the Bahamas from the southeast with hopefully more to come.

As we take a closer look at the circulation, eddies and blue marlin water movement, we notice an increased amount of eddies to the east of the islands than last year, but a decrease of eddies and features north of Abaco/Walkers area compared to last year. In fact, there is not much going on (yet) when you get north of Abaco to Walkers area deeper than 500-600 fathoms but that looks like it is about to change. The most encouraging conditions appear to be east and south of Abaco and east of Eleuthera and Cat Islands as there is a larger amount of blue marlin water coming up from the south and southeast and three counter-clockwise eddies, one east of the Hole in the Wall, one east of Eleuthera, and one east of Cat Island that are pulling the bluer-marlin water north. Pay attention to where these eddies are pushing the darker blue marlin water in a favorable inshore direction toward the islands and ledges for where the better conditions for fishing action will be. Right now it looks good south and east of south Abaco and in the Hole in the Wall area as well as east of Abaco over the ledges to the Wonderland area for billfish. These conditions should improve as these eddies normally progress north and northwest. Even some nice warmer and darker blue marlin water appears to be pushing into the Exuma Sound area.

The main eddies to focus on in this area are the counter-clockwise one centered near 76°30'W & 27°15'N over the Great Abaco Canyon and the larger clockwise rotation centered well east-southeast of Abaco area near 74°45-50'W & 26°00-05'N and how they move and interact to control the "blue marlin water". If these eddies progress to the north and northwest as they should, it will allow the other counter clockwise eddies further south to progress northward and improving the conditions east and north of Abaco and then north of Walkers allowing more blue marlin water pushing north

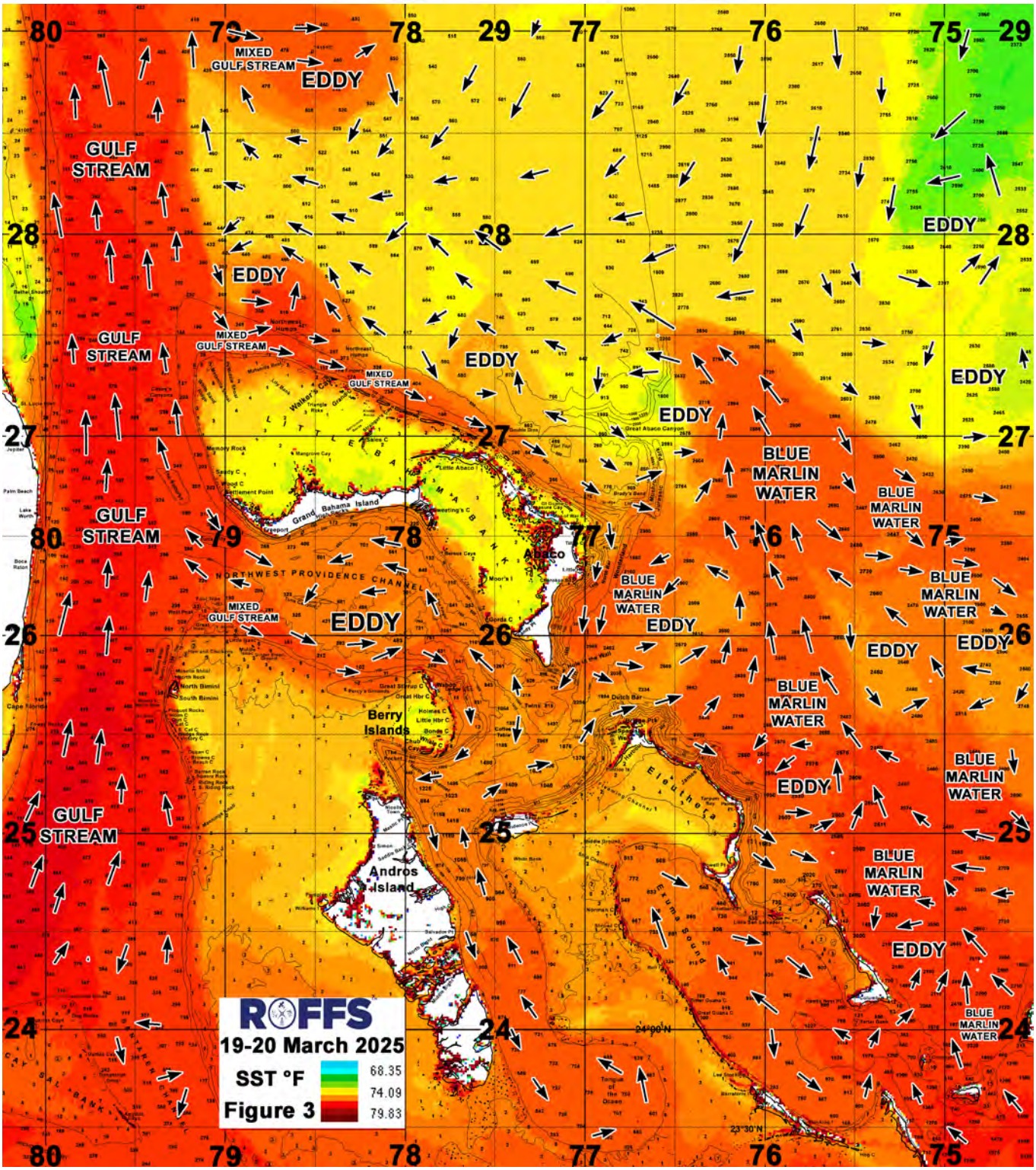


***Figure 3**: This year's conditions were derived from a variety of infrared sensors to get SST from NASA, NOAA, and ESA's Sentinel 3 satellites during March 19-20, 2025.*

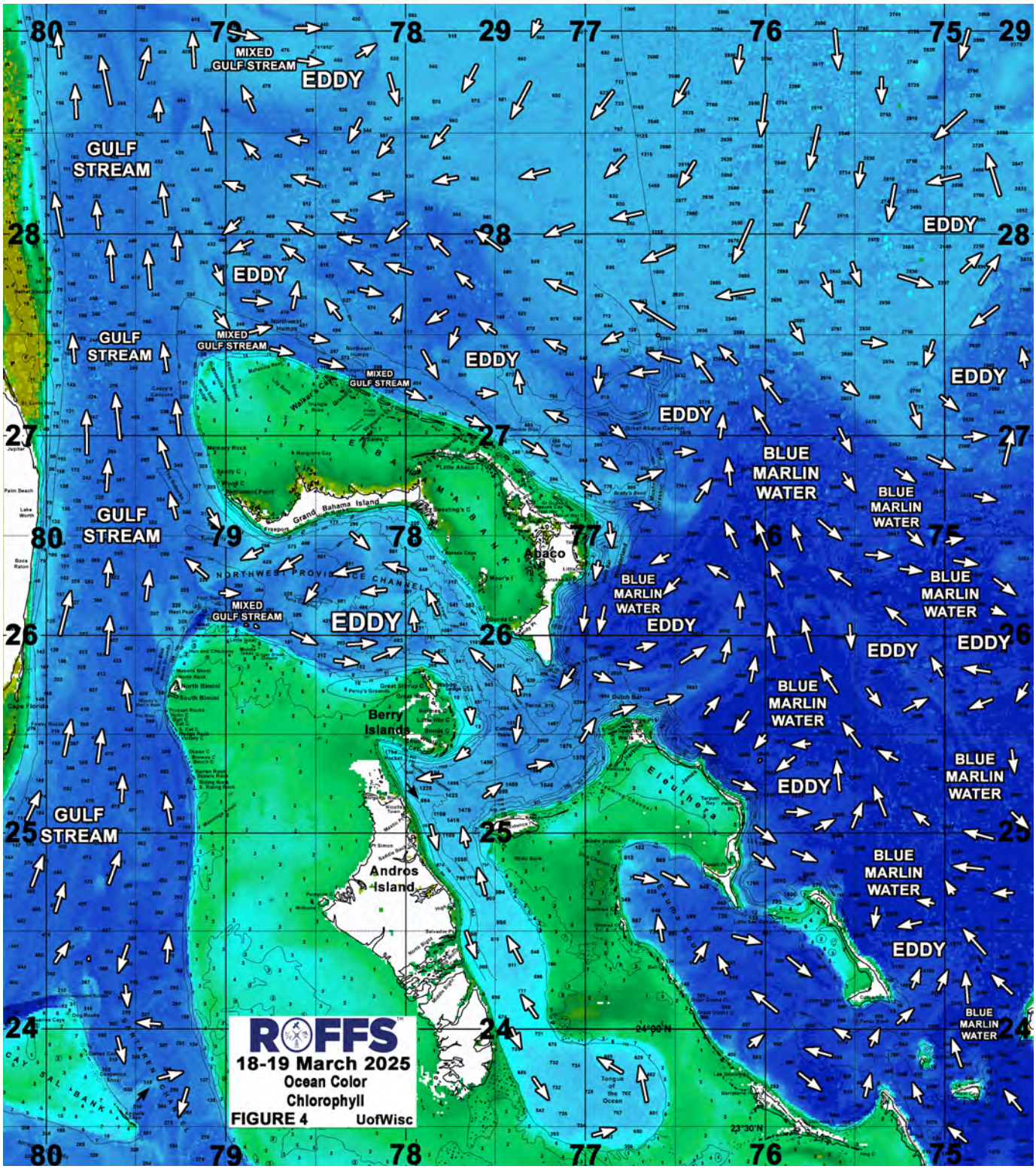


Figure 4*: Derived from the ocean color/chlorophyll imagery during March 18-19, 2025 from the ESA Sentinel 3 satellites, VIIRS sensors on SNPP satellite in combination with the Aqua and Terra sensor on the MODIS satellites provided by the University of Wisconsin SSEC. We consider this an image pair with Figure 3.*

and west and toward the Gulf Stream for the fishing season the next month or two. BUT if these eddies stay longer in a similar position or move south or southeast, it may not be as good for fishing in the Abacos compared to last year. Remember last year was REALLY good billfish action for a couple of months in the Abaco region, late March to May. For instance, right now you see that larger counter-clockwise rotating eddy in the Great Abaco Canyon is pulling the majority of the blue marlin warmer water north and west of it and out of range for many fisherman, we hope this eddy moves north or northwest to allow more of the blue marlin water to push closer to the Abacos. The cooler and bluer-green water in the north and northeast should remain intact and could prevent the other eddies to the south to push too far north.

Furthermore as always, if the wind and water is pushing into the Pocket south and southwest of Chub Cay, it can produce very good fishing action as there has been a few blue marlin and tuna reported off of Chub Cay recently. Further west and north we continue to observe the traditional counter-clockwise rotating flow centered in the Northwest Providence Channel now centered directly southeast of Tuna Canyon. This eddy pulls in Gulf Stream water and interacts with the Island banks and provides good conditions for tuna, dolphin, wahoo and even marlin in this area. In fact, there has been reports of GOOD fishing so far this year in the Northwest Providence Channel for blackfin tuna, and white marlin and a few yellowfin tuna. Farther north, north of Walker's Cay and the Abaco Islands, conditions have been changing rapidly, but even with the cooler water and lack of "blue marlin" water in the northern Bahamas, they have been catching a few blue marlin and plenty of white marlin around with tuna's mixed in north of the corner to Walkers and the eastern side of the Gulf Stream.

To back up our ocean observations, there is nothing more valuable than client feedback and reliable fishing reports where we enjoy catching up with our clients and learning what the water conditions are telling us. With that said, we have found further evidence of a possible earlier than normal or certainly a similar or better season in the Bahamas by getting several promising fishing reports. We have heard that the billfish action has started to heat up and become good these past few weeks off Abacos down to the Hole in the Wall (white marlin, sailfish and blue marlin) as it makes sense as the larger amount of blue marlin water has just arrived. Furthermore, a number of reports of good early season tuna and white marlin with a few blue marlin mixed in north of Walkers to the Corner and within the Channel north of Berry Islands. The smaller eddies directly north of Abaco and north of Walkers will be short lived and the conditions north of Little Abaco to Walkers area changes quite rapidly. However, the stronger edge of warmer mixed Gulf Stream to the south and the cooler water to the north of Abaco to Walkers to north of the corner around 250-500 fathoms looks really good. Reports further south off of Cat to Long Island and San Salvador suggest wahoo action is steady but not great, but the yellowfin tuna are in higher numbers this year than the past few years, which could be a good sign. Not many reports of mahi yet, as in recent years the mahi have shown up later in the season in larger numbers, but there certainly are mahi around as the SST is within range. Overall the reports we have gotten has been positive for a good start to the main Bahamas fishing season.

As the water warms in the coming weeks, we anticipate that there is a good chance that a substantially higher amount of billfish, tuna and other species will continue to be moving closer to the Bahamas Islands. These present conditions look different than last year, but already have indicators of a slightly earlier start to the better fishing action compared to last year as the water is

closer to normal and warmer. So if fishing action is not good yet near your main Island, stay patient as all signs show that it should improve and warm up, especially for mahi and tuna and billfish. So stay tuned to ROFFS™ and order to keep track of the day-to-day better conditions for fishing action in the Bahamas. ROFFS™ will be monitoring these and other conditions that develop over the next several weeks and months as we do in other areas.

Concluding Thoughts

Based on what we have been observing and hearing in March thus far, it should be another good fishing season in the Bahamas, especially in March and April to early May in the Abaco Islands and south. The way the eddies have set up this past few weeks has allowed to higher amount of "blue marlin water" to push closer to the eastern Islands from southeast to northwest offshore of Long Island to Cat Island to Eleuthera Island and now directly east to southeast of Abaco Island. These larger amounts of "blue marlin water" closer to the Islands to the east and south is a GOOD sign of better fishing action to start the main fishing season. Although the majority of the warmer blue marlin water has not yet pushed to the Gulf Stream to the north of the Bahamas, we think it may happen soon and improving the areas near Walkers to northern Bahamas in the coming few weeks but it all depends on the eddy movements to the east of the Abacos and Eleuthera. It is also going to be interesting to see how the cooler winter in most places (especially up north) will affect the ocean conditions and fishing around the Bahamas areas. We think it may be a good indicator keeping the SST's in check early in the year and not over warming providing a normal to better fishing season.

The reports and conditions have hinted at a quicker start to the billfish and tuna season in the Bahamas and the SST has been warmer in most places in the eastern and southern Bahamas that may contribute to the earlier arrival of the larger population of fish. The water in the north and northeast of Abaco does appear cool still and blue-green but also creating some stronger water mass boundaries to attract bait and larger fish. So the better fishing action north of Little Abaco to Walkers may be slower to start but will heat up in the next month but the conditions in the southern and eastern Bahamas looks GOOD.

We will continue monitoring these ocean conditions within the Bahamas region closely over the next two months. As these main eddy features and currents progress, the areas of better fishing conditions will change and it depends on where the currents and eddies are pushing over good structure and toward the ledges and banks. Overall, it has already been a GOOD start to the Bahamas fishing season this late winter and early spring especially in the Abaco areas as SST is warmer compared to last year but normal to slightly above normal to the 20+ year mean. Farther south, there is less marlin action (maybe related to lack of effort/reports) but decent wahoo and yellowfin tuna action. With the warmer than normal SST conditions, it could indicate a quicker start to the more productive fishing season especially for billfish BUT could get too warm in late May and June and allowing the majority of the fish pass through the region earlier and move north. However, there will always be some resident fish that stays in the area until early-to-mid summer. Overall the conditions look BETTER than last year at this time, especially east and southeast of Abaco down to the Cat and Long Island areas and within the NW Providence Channel where the counter-clockwise eddy is well pronounced creating good edges and flow.

In conclusion, it is important to note that good fishing action on a daily basis is strongly linked to local, short-term (24-48 hours) current conditions that concentrate the fish once the preferred habitat of the fish are in a particular region. When the water masses and boundaries of these conditions are stable and favorable, i.e., continuously pushing over good bottom topography and structure then they concentrate the baitfish and larger fish can be found foraging. This means that the fishing action on any given day is controlled by daily and relatively small-scale (1-10 mile) movements of the currents and their water mass boundaries. Our experience indicates that to reliably forecast specific concentrations of fish on a daily basis, one must evaluate the ocean conditions on these scales. Relatively small subtle changes in the currents and their boundaries often have dramatic effects on the distribution and concentration of fish. Contact ROFFS™ for these daily detailed fishing forecasting analyses and get the inside track to where the better conditions will be tomorrow. We again highly recommend when the weather permits, that you prepare now for the spring Bahamas fishing season and other fun fishing trips or your trip from the east coast of Florida as the conditions and fishing action is already good in many places and should improve over the next few weeks as the water warms and larger amounts of “blue marlin water” works its way north to northwestward toward the Gulf Stream.

Stay safe, good luck and stay in touch with ROFFS™ on our web site www.roffs.com, over email (fishing@roffs.com) on Facebook/Instagram @roffsfishing or subscribe to our newsletter for additional news and reports related to where the better conditions for fishing action is occurring each week. Thank you for your continued support.

Safe and Successful Fishing from Team ROFFS™

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