

objective is to encourage coexistence among recreational and commercial boaters, the marine industry, property owners and the environment. Citizens for Florida's Waterways advocates education in the safe and considerate use of watercraft with respect for the marine environment.

SEAGRASSES Are the LIFE-BLOOD of the IRL

Muck vs Runoff vs Septic Tanks

Take Your Pick

Every Potential Repair Approach Should be Measured by

How Well Does the Repair HELP RESTORE SEAGRASS **Seagrass Recovery is** THE SUSTAINABLE FIX

Pollution Has Many Sources Turn Off the Thermal Pollution at Port St John

The impacts of an ever-increasing local area manatee population and a decreasing acreage of seagrass here in the IRL are in direct conflict with the efforts to restore the health of the IRL. This is especially critical during the winter season when manatee numbers surge and seagrass density and growth rates decline. Here in the IRL, the wintering manatee population (nearly 2,000 by recent actual count) has reached a level that can only be described as a localized over-population.

We are not alone in this phenomenon. A similar problem is occurring in King's Bay on the Crystal River. There is one major difference though. The source of attraction for manatees in King's Bay is the natural warm water (72degF) from the multitude of spring vents in the Bay area. Fortunately, so far, the clear waters in the Bay have been able to produce an ample supply of forage for the 500-800 manatees that are wintering there the last few years.

Our winter population here in the IRL is much larger than that of King's Bay and even though we have many more acres of waterway, we lack the clarity of the water and seagrass tends to only exist in depths under about 4 feet. The IRL does not naturally provide a consistent 68degF environment in the winter, which is required for the manatee to survive over time. Ironically, it is a man-made source of warm water that was once believed to be crucial to the survival of the manatee that is now playing a role in the overall declining health of the IRL ecosystem.

Here in Brevard, in the Central and northern regions of the IRL, we host approximately over half the entire 3,488 East Coast population during the winter months and this number is increasing. There is a limit to the ability of the available forage (seagrass) to sustain the grazing needs of the herd. The resulting impact of reaching that limit is a

Pollution Has Many Sources Turn Off the Thermal Pollution at Port St John (Continued from Page 1)

massive, long lasting loss of seagrass. Also, we are now experiencing a large loss of manatees due to undernourishment and starvation. But, worst of all, will be the death of the IRL ecosystem as we know it. Because, as the seagrass goes, so goes the IRL.

Around 1960, to support the growing power needs of Orlando and east central Florida, two power plants were constructed on the IRL in the area we know as Port St. John. In those days it was common practice to use natural waterways as a source of cooling water for the generating equipment and simply cycle the warm water back into the waterway. A quick look at the collection of power generation plants in Florida will illustrate this fact.

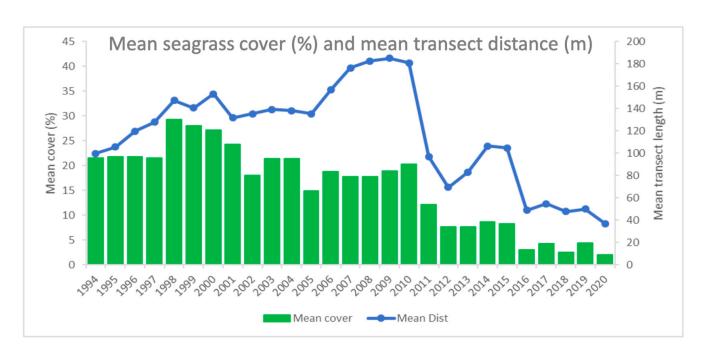
By 1974, the practice was recognized as having a negative impact on the natural ecosystem and the Federal Clean Water Act directed that all sources of Thermal Pollution be rectified. Through no fault of the manatee and with all blame squarely on the shoulders of humans who unnecessarily sought to "save the manatee", these sources of thermal pollution were declared as necessary "manatee sanctuaries" and required by rule of the USFWS to

maintain warm outflow whenever the ambient water temperatures dipped to 68degF.

So, for nearly 60 years, we have trained the east coast herd of manatees to "migrate" to the manmade warm waters of Brevard. We are faced with a few options:

- 1) Turn off the warm outflow and hope most of the manatees find their way farther south for warmer water, knowing that many may not and face death from cold stress.
- 2) Turn off the warm water and figure out a way to coax them to relearn the natural migration farther south to safer warmer waters.
- 3) Keep doing what we are doing and watch the increasing manatee population and declining seagrass supply reach the critical point and see the IRL and most living creatures in it face massive die off.

When one looks at the abundance of forage available to the south of the IRL in naturally warmer waters, you have to ask your self – "What are we accomplishing with the warm water discharges at Port St John?"



Citizens for Florida's Waterways PRESENTS

Our 24th Annual

POWERBOAT POKER RUN Saturday, July 10, 2021

Registration at Kelly Park East (Merritt Island)

9:30 to 10:30 am

As Always - Chip Stops at Participating Waterfront Businesses

Cash Prizes: 1st, 2nd & 3rd best hands

Cash prizes will be determined by the size of the pot

Prizes for Gentleman with the most Kings

and Lady with the most Queens

PLUS – Many Random Draw Prizes TOO

Always a Fun Day for the Whole Family!

\$25 Boat Registration – Includes one Poker Hand and one Event T-Shirt \$15 Additional Poker Hands and \$15 T-Shirts Available Separately

For More Information, Updates and Details
Visit our Website: cffw.org or

Follow "Citizens for Florida's Waterways" on Facebook Or contact Bob Atkins – ratkins@cffw.org







CFFW History 1994 - 2021

We are currently working with the FWC and the USFWS in the pursuit of a reduction or elimination of the warm water outflows in Port St John to try to return the manatee to a natural migration. The historically unprecedented thousands of manatees wintering and remaining in Brevard year-round is a known contributor to our diminishing seagrass acreage, as well as a lethal threat to any chance of replanting and regrowth. These are significant factors in the current and future state of IRL health.

CFFW was very instrumental in the successful effort to reclassify the manatee from Endangered to Threatened in the Spring of 2017. It was long overdue and although we provided the USFWS with an abundance of supporting data and documentation which supported the more correct classification as Recovered, we accepted the result as a small victory of science over emotion and politics. You can find our input to USFWS among many other interesting documents posted in the "library" section of our webpage.

Long before the current crisis in the Indian River Lagoon (IRL), CFFW was standing for resident's interests to preserve enjoyment of the IRL. Back then the crisis was a looming loss of access to and usage of Brevard County waterways because boating was wrongly accused of creating a crisis of potential extinction of the manatee. Years later, we know there was NEVER a manatee crisis.

Recreational boating was basically unrestricted prior to the mid 80s. The Space Shuttle Program was well underway and the influx of several thousand families with above average income created a boom in recreational boating. Many families, young adults and teenagers enjoyed watersports in the wider areas of the waters in proximity of their homes in Cocoa Beach and central Merritt Island. The shorelines of the causeways and the spoil islands were weekend destinations for a family picnic or teaching the kids and enjoying watersports. Residents everywhere could idle to the end of their respective canals and proceed with caution on plane to their favorite destination. In those days, the Kiwanis Basin was

the home of the Space Coast Ski Club and their ski jump was a prominent fixture.

Then came the save the manatee club (SMC) and an organized group of non-government organizations bent on "saving" the environment. Given the opportunity, these organizations would eliminate man (other than their own self-righteous members) from the environment. Controlling the growth of the human population is a core principle. The manatee became their tool to discourage use of the coastal waterways in any manner that did not meet their approval. First, they created a manatee extinction crisis that did not exist (1). Then, they knowingly and wrongly fingered recreational boating as the primary cause for the phony crisis (2). And then, without any scientific research or analysis declared slow speed of motorized watercraft to be the ONLY approach for manatee protection (3). The past 45 years of data collection, research and analyses have eliminated the factual basis for these three primary tenets of manatee crisis and protection in Florida.

Recreational boaters were painted as the cause of impending manatee extinction and the club was determined to eliminate motorized recreational boating in most areas of Brevard. By the early 90s, local boating public had seen and heard enough to finally recognize that the State and Federal governments had colluded with the SMC and really could, and, were going to impose more restrictions on Brevard waterways than anyone could have imagined possible. (In fact, in those days, the executive director of the SMC was indeed ALSO the highest-level State employee with direct responsibility for manatee protection). Thousands of boating supporters protested individually. A small group of folks recognized that some unification of those voices was the best hope to combat the SMC. We formed Citizens for Florida's Waterways (CFFW) for just that reason.

The resulting manatee protection zones in Brevard County remain as the most onerous

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CFFW History 1994 - 2021

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of all the Florida coastal counties. Over 80% of the abundance of shoreline, including almost all causeway shore is now regulated slow speed. In addition, these "shoreline" zones included the deep-water surrounding areas of the Cocoa Beach Country Club and extend as far as 2,500 feet to capture all of the popular recreational spoil islands in the Indian River. This eliminated all the desirable watersports areas. But, access and navigation were also drastically impacted through restrictions of Sykes Creek, the Barge Canal in Merritt Island, and all the access channels to Cocoa Beach, including the 520, Houseboat Cut and the deep water recreational areas south of the golf course.

Since 1994, Citizens for Florida's Waterways has been campaigning on behalf of boaters in Brevard County and across the State. Our resolve and purpose remain steadfast. We are relentless in our pursuit of scientific data and facts with respect to understanding and implementing the most effective protections for manatees without imposing unnecessary or ineffective restrictions on boating.

To that end, we maintained a well-informed leadership that motivated the formation of the Manatee Forum in 2004. The Forum now meets semi-annually, is now hosted by the Florida Fish and Wildlife Conservation Commission (FWC), supported by the US Fish and Wildlife Service (USFWS) and attended by the various stakeholders in manatee management and protection. The meetings of the Forum provide the best interchange of the latest science and an open discussion of the issues.

In addition, CFFW attempts to attend every hearing and workshop, sends representatives to Tallahassee, meets with boating interests in other parts of Florida, and worked to organize Florida's first statewide boating coalition, Standing Watch. We've written letters and columns in Florida Today, Florida Sportsman and Boat US magazine, have been interviewed for dozens of articles in several newspapers, and have been interviewed on-camera by several television news stations.

When we introduce ourselves to someone new, they usually ask something along the line of "are you for boaters or manatees?" It's a reasonable question because of the way the issue is commonly framed in the press, but the answer is simple: Citizens for Florida's Waterways exists to promote a reasonable truly science-based coexistence between man AND the marine environment. We work to preserve the environment in a way that will allow us to enjoy it while assuring that our children and grandchildren will be able to enjoy it in the future.

Our board of directors includes members who spend many hours studying trends in manatee population, births, mortality and disease. That's why we weren't surprised when 3276 manatees were counted statewide in 2001, 40% more than the previous high count and six times the estimated population in 1972. In fact, we publicly predicted that record count months ahead of time and were asked by the Fish & Wildlife Conservation Commission how we could have known. We knew that the bitter cold that year would force most manatees to the warm water discharges, and the clear, calm weather would allow a good count.

We studied the increases in natural manatee mortalities and other factors over the years and concluded a healthy population growth rate of over 5 percent. We also weren't surprised by the lower count in 2002, hampered by warmer weather, or the record counts on the east coast in 2003. The growth rate has remained steady and the recent consecutive record counts have exceeded 6,000 for the last four years with a high count of 6620 last year - which is consistent with our growth predictions over 15 years ago. Recent analyses of the counting methodology and implementation by USFWS has resulted in the establishment of fact that actual population is at least 25% higher than the count – now in excess of 8,000 in Florida waters alone.

One of our associates studied the spacing of propeller wounds and derived a relationship between the spacing of those wounds and the sizes of boats that couldn't have caused them. He further refined

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CFFW History 1994 - 2021

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his model to show which way the vessel was traveling with respect to the animal, and the approximate size of the propeller. Whale researchers in Europe and dugong researchers in Australia are now applying his findings to their own work.

In 2001, CFFW helped raise \$45,000 to fund a study of underwater boat noise by the world's foremost expert in manatee hearing, Dr. Edmund Gerstein. That study confirmed Dr. Gerstein's longheld belief that manatees are unable to hear slowmoving boats until they are dangerously close, but can hear fast-moving boats while they are still at enough distance to let them avoid the boat. The use of Dr. Gerstein's patented sound-producing device may one day make pervasive slow speed zones a thing of the past. Also in 2001, five members of CFFW filed an administrative challenge to stop the massive new slow speed zones passed by the Florida Fish & Wildlife Commission. Joined by attorneys from Standing Watch, the city of Cocoa Beach, the city of Titusville, and Sea Ray Boats, we showed how the Commission failed to follow their own rules when creating the new zones. Shortly after losing that challenge, CFFW raised \$25,000 and hired a prestigious Tallahassee law firm to appeal the decision. Ultimately, the appellate court decided not to get involved in this contentious issue and issued a per- curiam decision upholding the state's actions.

Many of our members and Board of Directors have served on various committees over the years, including the Florida Governor's Boating Advisory Council, Brevard Marine Advisory Council, the Manatee Protection Plan- Ad Hoc Committee, the Brevard Dredging Committee, The CM3P or Comprehensive Maritime Management Master Plan, the Manatee Forum, the Indian River Lagoon Citizens Advisory Council and others.

CFFW is also urging the state to listen to sound science and follow where that science leads. We have worked many years cultivating a relationship with the various State and Federal agencies to ensure that the boater and waterfront property

owner are represented and given a voice. CFFW has had a lobbyist in Tallahassee for several years working to represent our interests and advise us on any legislative issues that we should be aware.

In 2014 we introduced methodology and results to determine the manatee carrying capacity of the Indian River Lagoon. While most of the effort to understand carrying capacity investigated the abundance and availability of warm water, we showed that locally in the IRL and in fact throughout peninsular and panhandle Florida, it is available forage (predominately seagrass) not warm water, that limits the environmental capacity to sustain a manatee population.

Over the years, we have worked with the Brevard County Commission to have a re-evaluation of the over-restrictive protection zones imposed in 2002. In 2006 and again in 2016, the Brevard County Commissioners unanimously agreed and formally requested the FWC to work with the county to better understand the effectiveness of the zones with the potential to modify the boundaries. Both requests were almost completely ignored. During the 2016 Florida Legislative Session, we introduced language in the Florida Manatee Sanctuary Act to require the establishment of measurable criteria to be used in evaluating the effectiveness of individual boating regulation zones for manatee protection. We worked with USFWS to undertake the action to upgrade the status of the manatee from endangered to the more realistic classification of threatened. We have supported the citizens of Pinellas County and Crystal River and their representation, Pacific Legal Foundation (PLF), as they pursued more reasonable regulations in their local areas.

We continue to grow our club and work toward reasonable regulation of our waterways. We invite you to join our club, attend one of our meetings or just enjoy one of our fun day-trip boating outings.

Visit our website at cffw.org or visit Citizens for Florida's Waterways on FaceBook for more information.

Manatee Protection Should be Effective

On January 12 of 2016, the Brevard County Commission passed a SECOND unanimous Resolution (No. 20016-003) requesting the State FWC re-evaluate the effectiveness of the manatee protection zones implemented in Brevard County in 2002. A similar Resolution had been passed 10 years earlier on January 31, 2006 (No. 06-025). The FWC has yet to reasonably respond to EITHER of these Resolutions. This leaves one to contemplate: To whom does the FWC respond, if not to the highest level of County Government elected by the citizens of the county?

The emotional rhetoric in opposition to a simple evaluation of zone effectiveness would have left the casual observer dumbfounded - both during the public comment period at the Commission Meeting where the resolution was passed and, in the public opinion letters to the editor that followed. One would have thought the intent was to ask permission to openly kill and maim manatees.

Have you ever noticed that those who like to point the finger at boaters for asking relevant questions about manatee protection zones use phrases like "tear around" or "irresponsible". They believe ANY slow speed zone is a good zone. They cite the ONLY study that feebly attempts to establish effectiveness, which is completely biased - written by the same two individuals responsible for defining the zones (Calleson, Frolich). These zones exist solely on the assumption - slow speed is effective. Effectiveness was assumed a priori – never evaluated, assessed, or measured.

Thousands of waterfront residents in Central Merritt Island (as well as Cocoa Beach and other areas around Brevard and the State) have the legitimate expectation, maybe even the right to reasonable waterway access that they purchased years ago. They don't get waiver permits to reasonably pass through miles of slow zones. But, for the last 15 years, the unreasonable length of time to traverse through the zones to unrestricted

waterways has all but eliminated the trips. There was no pre-validation that these zones would be effective. Is it unreasonable to investigate if they have been?

There is an underlying misguided attitude toward boating. Are there effective zones? Sure! Are there zones that accomplished nothing? Absolutely! Let's take another look and do the best job we can to protect manatees and respect legitimate access to and enjoyment of the waterways.

Just a cursory look at the data accumulated over the last 40 years suggests that we might not have got the zone definition right. Let's take a closer look and see if we can improve what we've done – and maybe provided some relief to our boating residents as well. First, approximately 60,000 of Brevard's 165,000 acres of waterways – or about 35% have been regulated as SLOW, IDLE or NO Motorboat ENTRY. Additionally, about 80% of the shoreline has had a minimum 500 foot and as far out as 2,500 feet designated as SLOW speed. These vast shoreline buffers all but eliminate the premium watersports throughout the County. From a boating perspective, this is a high price. But what have we gained?

401 Brevard manatee deaths have been attributed to boat/barge collisions during 1974-2020. That is about 8/yr. But what is more interesting is the comparison of the mortality rates before and after the zones were implemented.

Prior to the 2003 zones the average was 7.1 /year Since the 2003 zones the average has been 10.7 / year

Why has watercraft mortality NOT decreased since we put them in? Does seeking a better understanding of zone effectiveness threaten manatees OR is it that it threatens the blind acceptance of the opinion that slow speed zones are required to protect manatees.

Manatee Population Near 9,000

It's hard to believe that the misguided manatee extinction crisis occurred because some alarmists estimated there were only 1,200 manatees as recently as the late 1980s.

The 2nd iteration of the manatee population abundance estimate is **8,810**. The estimate is calculated through computer modeling and statistical analysis and was released during December of 2018. This will be probably become known as the "2016 Abundance Estimate" because much of the analysis was based on data from prior years due to the amount of time and effort to complete the assessment. The highest actual statewide manatee count (synoptic survey) had been 6,620 from early February 2017

An overview of the abundance estimate process and findings was presented at the Fall 2018 Meeting of the *Manatee Forum*, held at FWC's Florida Wildlife Research Institute (FWRI) in St. Petersburg. The findings, which were highly anticipated by those of us arguing that the manatee no longer should be listed within the Endangered Species Act, had been in work for several months. They were released to the public immediately following the discussion.

This is the 2nd such estimate. You may recall that the initial estimate, released in 2012, was **6,305**. This number, along with an extensive population prediction model, was the foundation of the USFWS decision to reclassify the manatee from 'endangered' to 'threatened' in March of 2018. Prior to the 2012 estimate, the highest statewide count had been 5,077 in January 2010.

For those of you statistically inclined, the 95% confidence interval for the 8,810 population estimate is from 7,520 to 10,280, but based on the usage of the previous 6,305 throughout the science, we fully expect to see the 8,810 widely referenced.

What does this mean?

First - Irrespective of the gnashing of teeth of those fearing the worst for the manatee due to high observations of red-tide and watercraft mortality, the population is not only surviving but actually increasing at a rate in excess of 5% annually. Many of us would use the terminology "explosive growth" to describe a population that is doubling every 10-15 years. We at CFFW have been pleading with the agencies to wake up to the fact that the manatee is more likely to become a nuisance than endangered. These estimates are consistent with that prediction.

Second – Removal of the manatee from the ESA is long overdue, accompanied with significant reduction of:

- millions of tax dollars spent
- thousands of Federal and State agency hours expended
- continual OVER-regulation of Florida's public waters for manatee protection

Third – The focus on manatee protection should be realigned from boating regulation to improving the quality of the environment the manatee requires for survival, water quality and seagrass, and assuring it's long-term sustainability. Managing the growing manatee population, as opposed to the current approach of promoting unlimited growth, will need to be a part of the preservation of the waterway ecosystem for all inhabitants and users, including man.

Boating AND Manatees

If anyone were to ask you about Merritt Island life, you would be hard pressed to give an answer that did not include one of these topics. Yet, many of you see them at odds with each other. There is a history behind this belief, but it is no longer valid.

When we introduce Citizen's for Florida's Waterways (CFFW) to someone new, they eventually ask something along the line of, "are you for boaters or manatees?" It's a reasonable question because of the way the issue is commonly framed in the press, but the answer is simple: CFFW was formed in 1994 because we do not see this as an either/or question or answer.

CFFW exists to promote a reasonable coexistence between man and the marine environment. We work to preserve the environment in a way that will allow us to enjoy and assure that our children and grandchildren will be able to enjoy it in the future. We pledged ourselves to pursue data and facts and promote good science, not opinions and politics, with respect to manatee management and to accept and follow the real science, wherever it leads.

So, what about the either/or question? Its roots go back to the 70s and 80s. One must recall and understand the generally accepted OPINIONS that shaped the thinking of the time. Even today, if you ask the proverbial "man on the street" to name three facts about manatees, he would probably name at least two of these three OPINIONS,

which have actually been proven to be FALSE:

The Basic Assumptions of Manatee Management.

ONE - The manatee is endangered, moreover in immediate threat of extinction.

TWO - Watercraft mortality is the greatest threat to the manatee survival.

THREE - Slow speed is the best - if not the only - method we have to save the manatee from extinction.

In fact, we had a minimal amount to support any of these opinions. Population estimates prior to 1991 were at best - a SWAG (an unsupported unscientific guess). Today, it is a difficult task to recover abundance estimates made prior to '91 and impossible to reconstruct the data they were based on. At the time, we combined these minimal SWAG assessments with actual mortality counts. With so few estimated to be alive and so many dying, the masses concluded that we were on a one-way path to extinction - Assumption ONE.

The reaction was to do SOMETHING to stop this eventuality. More and more manatees were dying each year and about 20-25% of those were due to "barge/boat" collisions – which lead us to Assumption TWO. The observation that the manatee was slow moving, also not completely factual, brought us directly to Assumption THREE.

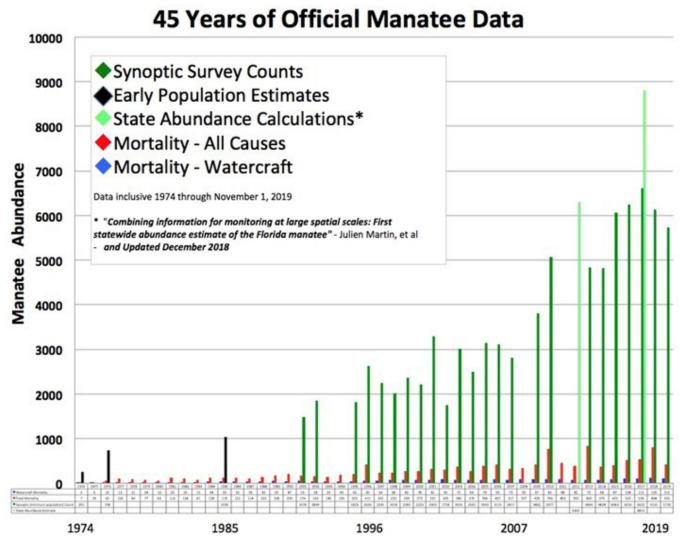
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Boating AND Manatees

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As has been the case now for over 45 years, increases in manatee mortality are more reflective of an increasing manatee abundance than any other single factor. But in times of minimal factual abundance data, our SIMPLEST best hope to save the manatee was to protect them from boats. For the last 35 years, that has been the central approach to manatee management.

Once again, the obvious solution was based on opinion - restricting operations of boats by making them go slower is obviously the path to success. In 1979, Florida passed the Manatee Sanctuary Act. It was by and large all about regulating boats.



Note: 2019 was the last Synoptic Survey

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Boating AND Manatees

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But the original content was very specific to approximately 20 locations, including the area around the power plant(s) in Brevard, where we knew we had large concentrations of manatees on an almost continuous basis.

But over the last four decades, and even during the last few months, more and more regulation has been imposed on large areas of Florida waterways, which hardly exhibit any manatee abundance during any time of the year. All of this ever increasing and continuing regulation still finds its basis on those same three assumptions.

Even if you believed that boating mortality was the worst threat to manatee survival in the 70s or even into the 90s, a simple look at the DATA accumulated over the last 45 years, should completely eliminate any such thought.

The data firmly establishes:

Assumption ONE – FALSE – Look at the Green bars. These are minimums – actual counted animals Assumption TWO – FALSE – Compare the Blue Bars to the Green (or the Red) Assumptions THREE – THE JURY IS STILL OUT

After all these years and all these regulations, we still don't know how to determine the relative zone effectiveness, or even if any particular zone has eliminated a single manatee mortality

CFFW does not seek to eliminate all boating regulations. We simply believe it's long overdue to step back and look at where we are. Ask the hard question: What is an effective protection and management strategy based on our improved understanding of the real situation? But not just ask the questions - seek answers and use them to develop more effective and comprehensive manatee protection and management plans in balance with the current data, analysis and knowledge.

Maybe, it's time to take the focus off recreational boating and put our resources to work on more important holistic questions of managing an ever-increasing population, under no threat of extinction, which is doubling every 12-15 years. What will be the impact of the manatee population in the next 20-30 years?

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