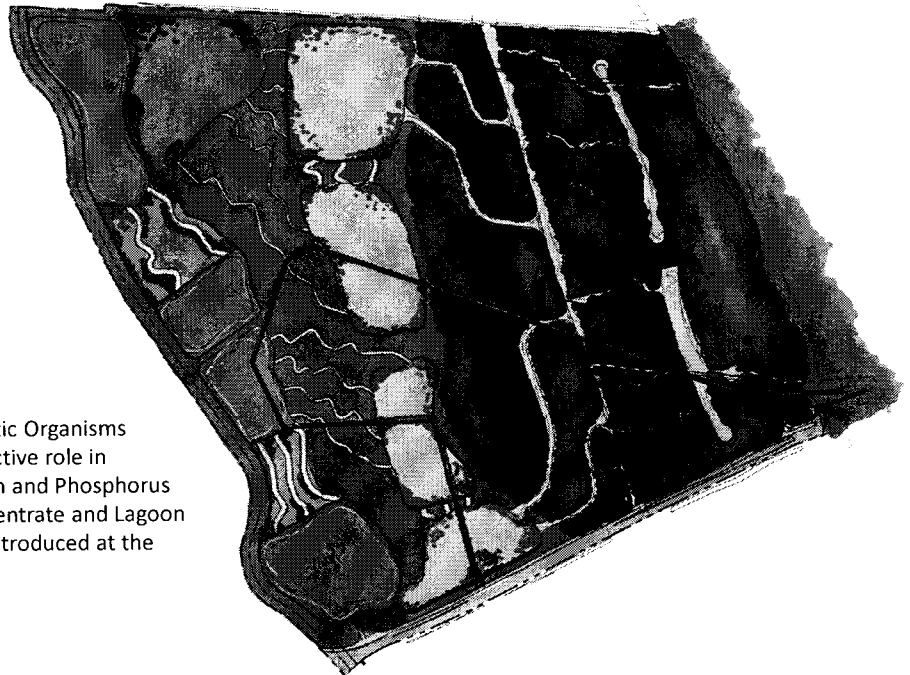


The Spoonbill Marsh Wetland Treatment System was designed as a Passive System to Naturally treat the Demineralization Concentrate generated at the Hobart Water Treatment Plant for safe disposal, but also to aid in the nutrient removal (Nitrogen and Phosphorus) from the waters of the Indian River Lagoon.

The native Vegetation and Aquatic Organisms throughout the Marsh play an active role in efficiently removing the Nitrogen and Phosphorus from the Demineralization Concentrate and Lagoon waters which are blended and introduced at the headworks of the Marsh.

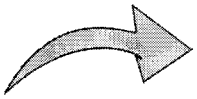


Since water began flowing to the Spoonbill Marsh in 2010, the Marsh has received and treated over 2.2 Billion Gallons of Demineralized Concentrate from the Water Treatment Plant, as well as nearly 4.2 Billion Gallons of water from the Indian River Lagoon.

Demineralized Concentrate Total Flow from 2010 to present (September 2016)



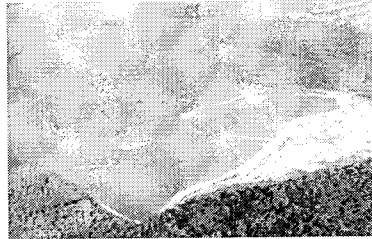
2.2 Billion Gallons



4.19 Billion Gallons

Indian River Lagoon Total Flow to Spoonbill Marsh from 2010 to present

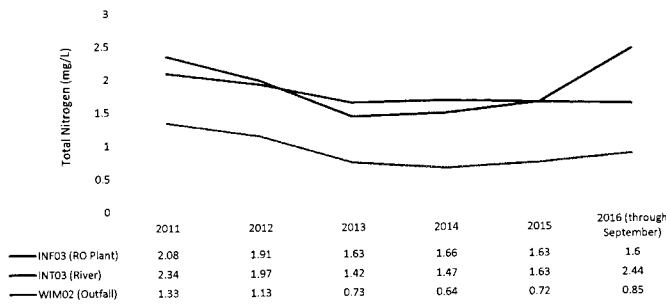
Spoonbill Marsh Nutrient Removal



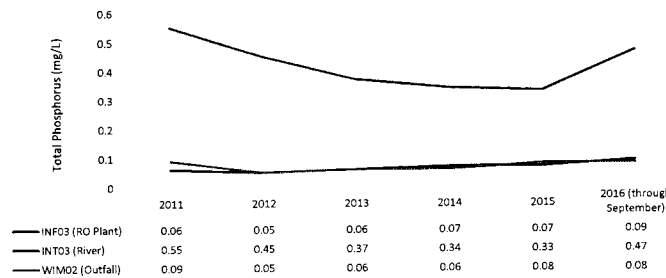
Sum of Nitrogen and Phosphorus removed by the Spoonbill Marsh (2010 to September 2016)

- Total Nitrogen 59,597 lbs
- Total Phosphorus 13,288 lbs

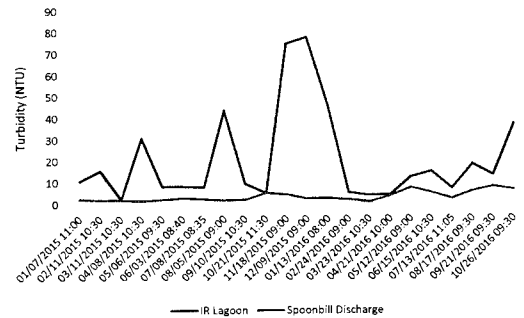
Spoonbill Marsh Total Nitrogen

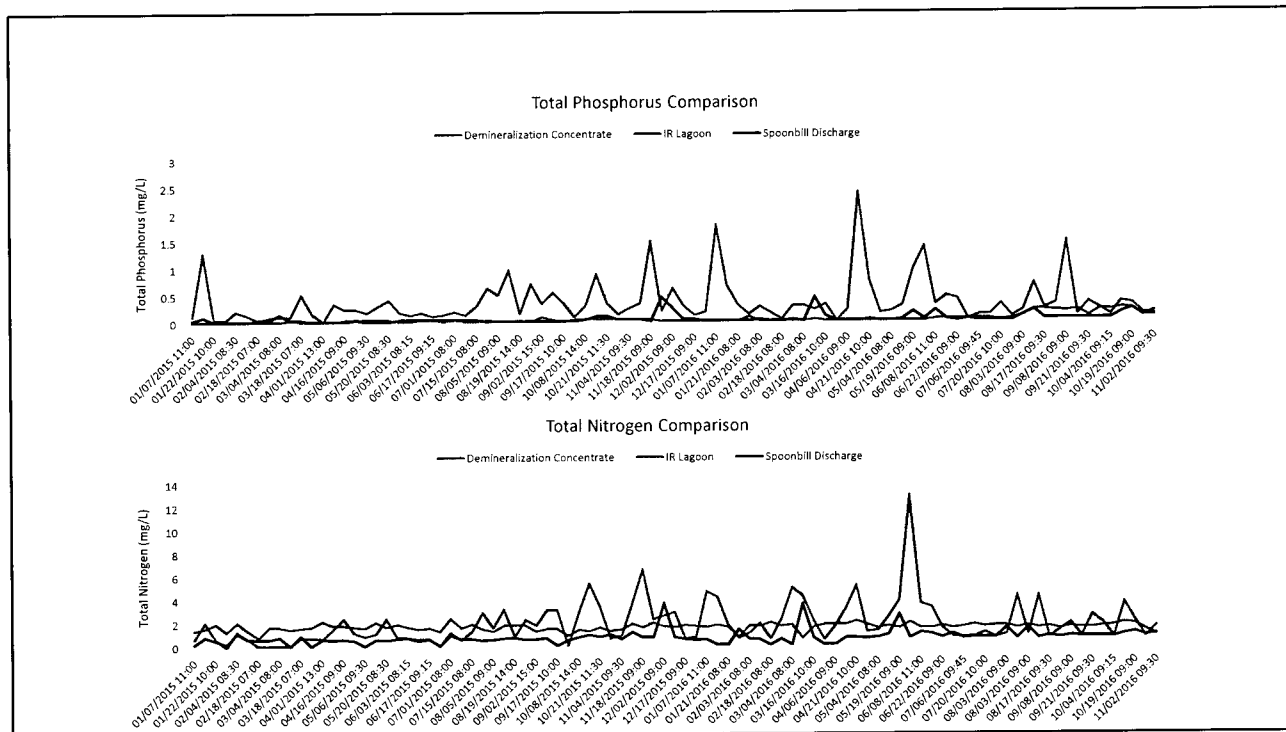


Spoonbill Marsh Total Phosphorus



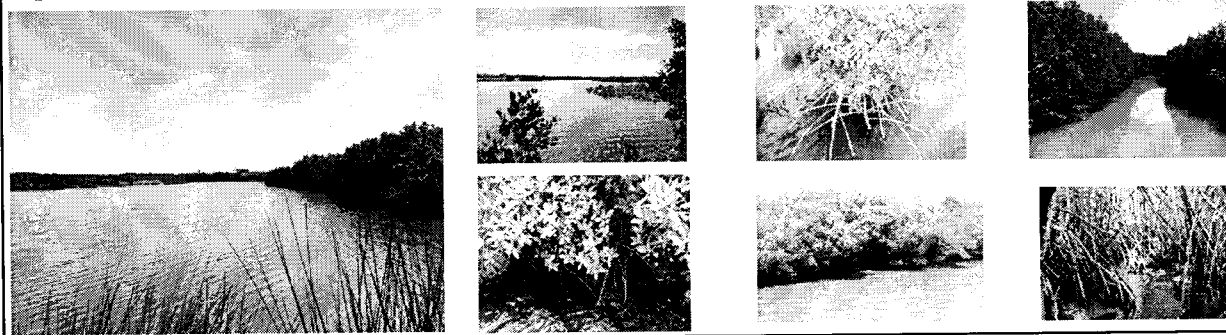
Turbidity Value Comparison





**Net Environmental Benefit Values from Annual Reports
2011 through September 2016**

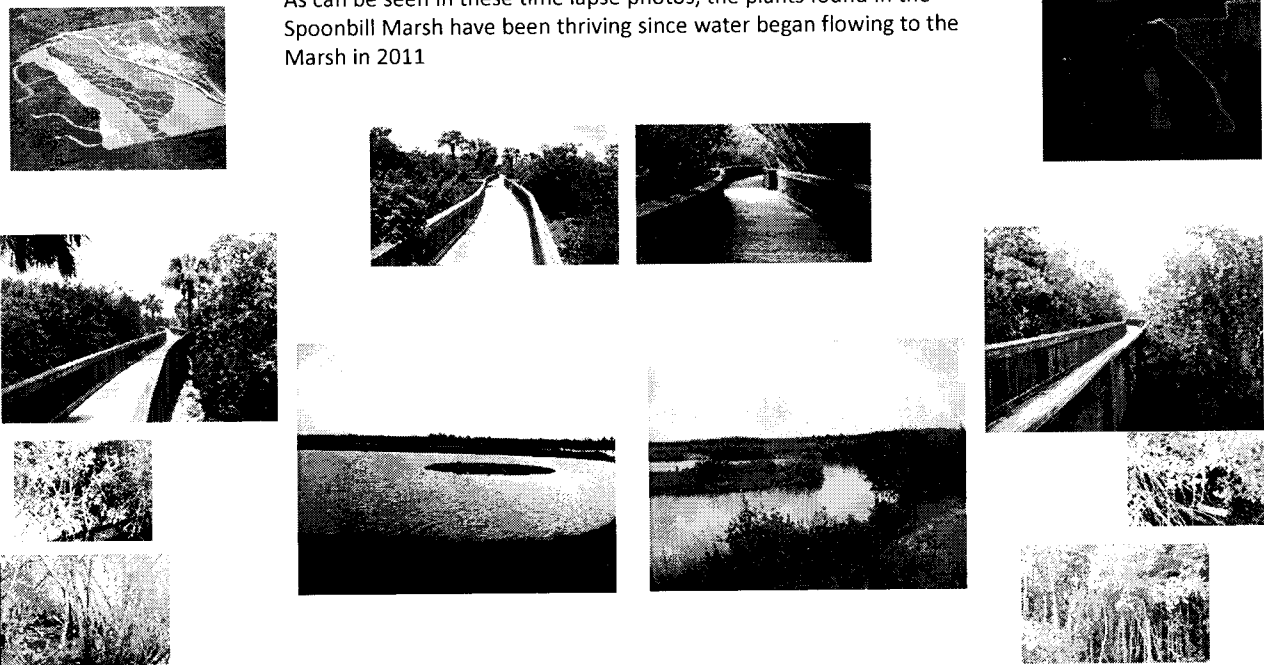
	Blended Discharge from the Static mixer to Wetland	Demin Concentrate from Water Plant	River Water Intake	Discharge from marsh to River at the Breeches			EPA Approved Waste Load Allocation (WLA)	Nutrient Load Removed by Wetland	Calculate Compliance with WLA	Net Environmental Benefit
SUM	1	2	3	4A	4B	4C	5	6	7	8
	EFF03	INF03	INT03	WIM01	WIM02	WIM01+WIM02	WLA	1-4C	4C-3	NEB
Total Nitrogen	71,007	29,610	64,971	107	34,877	34,984	16,554	36,022	-29,985	28,949
Total Phosphorus	6,000	997	14,708	6	2,411	2,417	576	3,583	-12,291	11,125



Post-Construction 2011

As can be seen in these time lapse photos, the plants found in the Spoonbill Marsh have been thriving since water began flowing to the Marsh in 2011

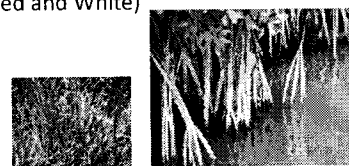
Present Day



The habitat created at the Spoonbill Marsh is home to many species of native plants and animals. Below is a partial list of the numerous species that have been seen in the Spoonbill Marsh.

Vegetation

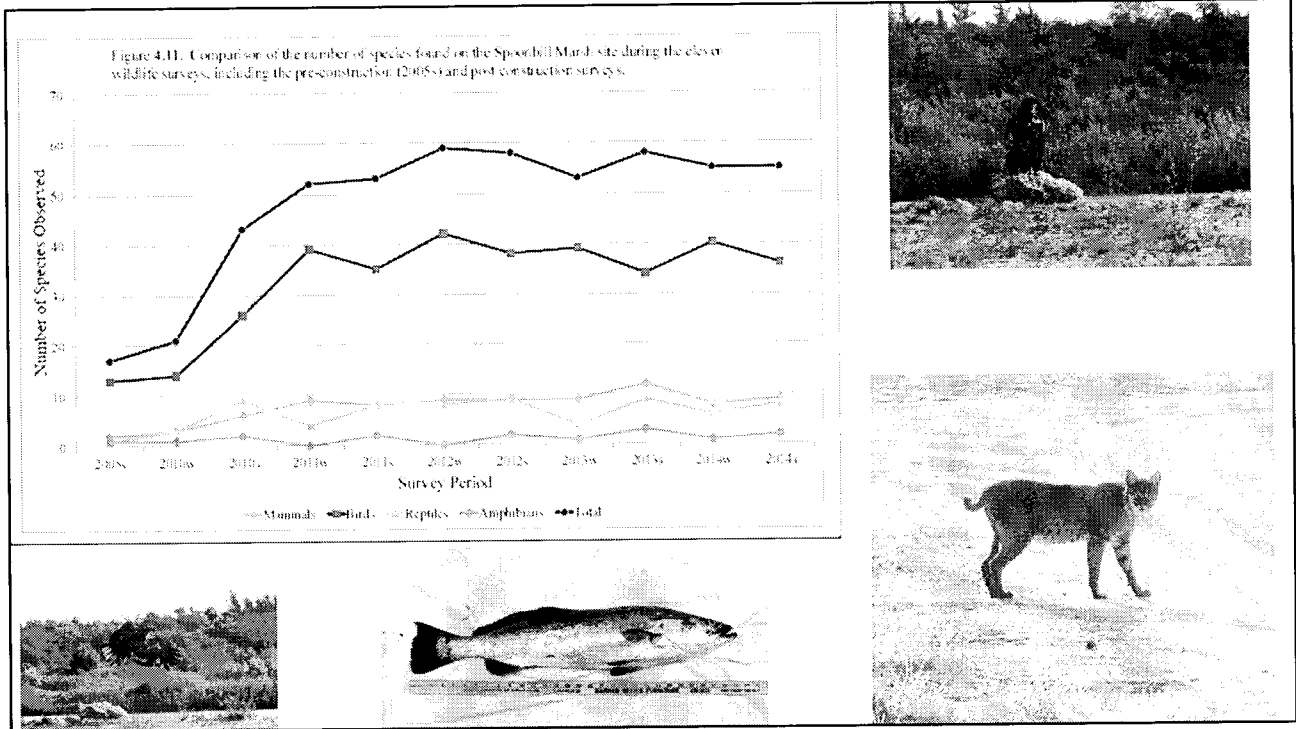
- Mangroves (Black, Red and White)
- Saltwort
- Sea Oxeye
- Black Needlerush
- Saltgrass
- Saltmarsh Bulrush



Animals and Birds

- American Alligator
- Bobcat
- River Otter
- Grey Fox
- Roseate Spoonbill
- Belted Kingfisher
- Great Blue Heron
- Osprey
- Double Brested Cormorant
- Red-Tailed Hawk
- Boat-Tailed Grackle





FISH

BLACK DRUM
Pogonias cromis

SPOTTED SEA TROUT
Cynoscion nebulosus

LADY FISH
Bodianus rufus

MULLET
Mugilidae

CROAKER
Sciaenidae

RED DRUM

HARD HEAD CATFISH

BLUE CRAB

SKATE

"red fish"
Sciaenops ocellatus

SHEEP HEAD
Ariopsis felis

MANGROVE SNAPPER
Lutjanus griseus

NEEDLE FISH
Botoniidae

SPOT TAIL PIN FISH
Diplodus holbrooki

SNOOK
Centropomus

WHITE TAIL DEER
Odocoileus virginianus

MARSH RICE RAT
Oryzomys palustris

RIVER OTTER
Lutra canadensis

BOB CAT
Lynx rufus

RACCOON
Procyon lotor

RED FOX
Vulpes vulpes

MARSH RABBIT
Sylvilagus palustris

VIRGINIA OPOSSUM
Didelphis virginiana

GREY SQUIRREL
Sciurus carolinensis

WILD PIGS
Sus scrofa linnaeus

MAMMALS

ANHINGA
Anhinga anhinga

LEAST BITTERN
Ixobrychus exilis

TREE SWALLOW
Tachycineta bicolor

GREAT BLUE HERON
Ardea herodias

SNOWY EGRET
Egretta thula

BOAT TAILED GRACKLE
Quiscalus major

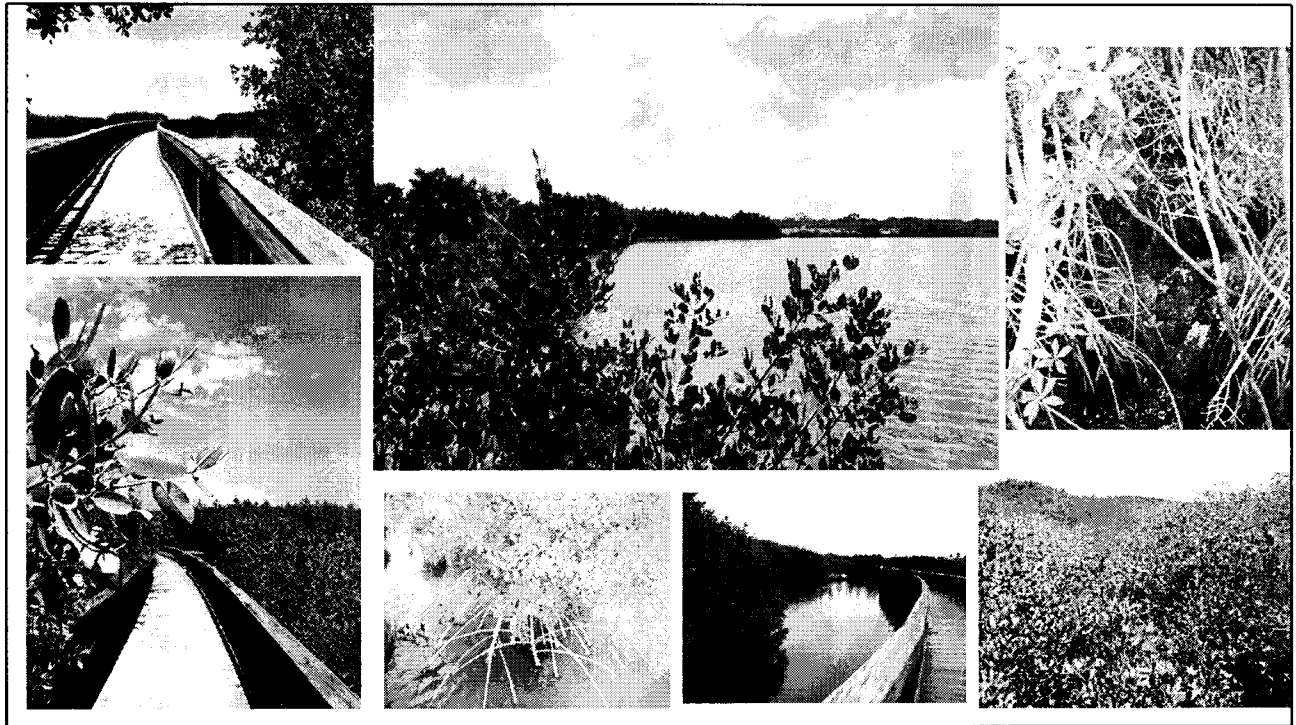
MARSH WREN
Cistothorus palustris

ROSEATE SPOONBILL
Platalea ajaja

WHITE IBIS
Eudocimus albus

COMMON TERN
Sterna hirundo

Birds



**INDIAN RIVER COUNTY
BOARD OF COUNTY COMMISSIONERS**

INTER-OFFICE MEMORANDUM

TO: Members of the Board of County Commissioners
DATE: November 15, 2016
SUBJECT: The Spoonbill Conspiracy
FROM: Commissioner Bob Solari

A county resident, Barry Shapiro, has made allegations about the effectiveness of Indian River County's Spoonbill Marsh. Among other things Mr. Shapiro alleges, "not only an environmental tragedy but also a potentially criminal cover-up of the truth by our county officials". (Shapiro letter "To whom it may concern" dated August 20, 2016) Shapiro asserts that the Spoonbill Marsh is "not properly functioning" (August 20, letter) and is damaging the Indian River Lagoon.

I am addressing this issue, as opposed to Mr. Burke, our Utility Director, or Mr. Reingold, the County Attorney, because, I believe, as will be made clear, the Spoonbill Conspiracy was not driven by any substantial problems at the Spoonbill Marsh but was simply a nasty and sophomoric attempt to alter the outcome of the last elections, specifically, my County Commission primary race against Jay Kramer. As Shapiro writes:

County Commission chairman Bob Solari has aggressively defended the marsh system and is currently basing his re-election campaign on the benefits to the county these marshes provide." (August 18 email and August 20 letter)

Perhaps the best place to begin this story is with a short description of the Spoonbill Marsh.

As many residents know, County drinking water is supplied from wells, which draw water from the Floridian Aquifer. The majority of County water is processed at the North County Reverse Osmosis Treatment plant. A byproduct of the reverse osmosis treatment process is demineralization concentrate, also known as brine. Basically water is drawn from the aquifer, goes through the reverse osmosis process, undesirable minerals and salts are removed, the potable water is sent to our water customers and the brine concentrate is disposed of.

Roughly 20% of what is drawn from the aquifer ends up as brine concentrate. For years this concentrate was simply put into a canal, which led to the Indian River Lagoon through the North Relief Canal. In 2002, the Florida Department of Environmental Protection (FDEP) asked the County to come up with an alternative discharge method for the brine concentrate.

The most obvious solution, one chosen by the COVB for its brine, was to construct a deep injection well to dispose of the brine by pumping it back into the aquifer. The County chose a much more innovative method of disposal, the Spoonbill Marsh, which would create a wetland from an old mosquito impoundment site adjacent to an abandoned citrus grove, both of which were being overrun by invasive species such as pepper trees.

When FDEP discussed the project with the County, FDEP was clear that any permit would require that the project clearly demonstrate a "Net Environmental Positive Benefit". This net benefit would require not only that the treated water entering the Lagoon be cleaner than the existing water in the Lagoon, but also demonstrate a net increase in wildlife populations including birds and fish and other marine life.

The Spoonbill Marsh is located on a 67-acre parcel of land owned by the Grand Harbor Development from which the County received a perpetual easement. It is bordered by the Lagoon to the east, the Grand Harbor Development and North relief Canal to the South, undeveloped Grand Harbor land to the west and an undeveloped parcel of conservation land owned by the Indian River Land Trust to the north. The Land Trust property and the Spoonbill Marsh are separated by a FDOT ditch, which drains water from U.S.1.

The Spoonbill Marsh process, while innovative, is fairly simple. The brine concentrate from the Water Treatment Plant is piped to mixing areas located on the western portion of the Spoonbill Marsh. Polluted Lagoon

water is pumped to the same location, mixed with the Brine and then moves through a series of ponds, runnels, restored wetlands more runnels and natural wetlands and eventually, after removing significant amounts of nitrogen and phosphorus, returns to the Lagoon.

The Spoonbill Marsh has been operating for just over six years and, given its purpose, can be considered a great success. It is clear to anyone who has visited the site that there has been a marked increase in both birds and marine life and regular testing documents the removal of significant amounts of nitrogen and phosphorus. In the twelve months corresponding to the County's 2015-2016 Fiscal Year, over 13,000 pounds of nitrogen and more than 2,300 pounds of phosphorus were removed from nitrogen and phosphorus laden waters, which, but for the Spoonbill Marsh, would now be polluting the Indian River Lagoon.

I am proud of the work that the County has done at Spoonbill Marsh. It is a cutting edge environmental project that everyone in the County can be proud of. Is it a perfect project? No. Is it polluting the Lagoon? No. Is it a step to restoring the Lagoon to better health? Yes, it most certainly is.

On with our story.

On the evening of Friday, August 19, I received a somewhat frantic phone call from a supporter telling me about a disturbing story about the Spoonbill Marsh that was running in Marc Schumann's blog, Inside Vero.

The Inside Vero blog begins with a picture of one of my campaign mailers, which touts the benefits of the Spoonbill Marsh. The first paragraph states: "County Commissioner Bob Solari, who is running for re-election, has made the effectiveness of Spoonbill Marsh an issue in his campaign..." Schumann then wrongly calls the Spoonbill Marsh a "wastewater treatment facility".

The bulk of the blog consists of an email sent on August 18, 2016 from Barry Shapiro. The email is, quite frankly, bizarre. It talks a meeting that Shapiro is "asked not to tell anyone about". The meeting was attended by people whose names he cannot disclose. It talks about a report written by someone whose name cannot be revealed. The report evidently says that the Spoonbill Marsh is bad, but the report is not attached to the email.

Interestingly though, Shapiro does state: "If you want to read the report I will make it available to you". At the County we were interested in reading the report. Mr. Burke emailed Shapiro asking for a copy on August 23. Shapiro replied the same day writing that it would be available "in the next couple of days". Having heard nothing from Shapiro Mr. Burke emailed back on August 30. Shapiro replied September 1, replying in part: "I have spoken with the key authors of the report and at this time they have asked me not to send the report directly to you".

Shapiro goes to a meeting he cannot talk about attended by attendees he cannot disclose upset about a report he will not share with us written by an anonymous author and vetted by leading scientists and environmentalists who are not disclosed.

What do we know about Shapiro?

1. Shapiro states: "Clearly I have a political ax to grind."
2. In Kramer's race against me for the County Commission, Shapiro gave Kramer a \$950 in-kind donation
3. On August 23, Shapiro had a letter to the editor published on TCPalm in support of Kramer for County Commission.
4. And in his own words, Shapiro is not an "...environmentalist or an expert in any way when it comes to issues of our ecology"
5. But Shapiro does have a "media background", which he used to try to get Kramer elected to the County Commission.

While Shapiro would not send the County a copy or the report, the County did obtain one and Mr. Burke notified the Florida Department of Environmental Protection about Shapiro's allegations.

Given the nature of the report and its context, released two days before early voting, written and vetted by undisclosed people championed by a supporter of my opponent, this should have ended things and would have, had 32963 not published a story about it.

While the story itself is written at the same level as Shapiro's email, it will serve to address some of Shapiro's allegations about Spoonbill Marsh.

The article is from the October 6, 2016 issue of 32963. The 32963 article on the Spoonbill Marsh runs under the headline "Environmentalists call

Spoonbill Marsh a 'toxic waste dump'" The article then lists allegations including:

1. "marsh water that is overflowing onto environmentally sensitive land to the north that is owned by the Indian River Land Trust."
2. Supposed disappearing water, that was not accounted for.
3. An outflow meant to facilitate the flow of water back to the Lagoon was not functioning.
4. Shortly after the facility was constructed the FDEP cited the County for permit infractions for "failure to construct the disposal system at the Spoonbill Marsh site in accordance with the approved design".
5. The Spoonbill Marsh "is detrimental to fish and wildlife."

Please note, despite the purposefully inflammatory headline, "Environmentalists call Spoonbill Marsh a 'toxic waste dump'", none of the allegations have anything to do with pollution. Yes, the article notes that Barry Shapiro says that the Spoonbill Marsh is "a liquid toxic waste dump", but Mr. Shapiro also clearly states that he is not an "environmentalist or an expert in any way when it comes to the important issues of our ecology." (September 20, 2016 letter) Shapiro also states about the report in question, "It's Greek to me but maybe you can decipher it".

So, and please think about this, the only basis for the nasty headline, is a statement from someone who claims he is not an environmentalist or "an expert in any way when it comes to the important issues of our ecology", who in fact says of the report, upon which he bases his malicious politically motivated comment: "It is Greek to me but maybe you can decipher it."

"Its Greek to me". Now, for Mark Schumann and his coterie of useful idiots (and let me give a special shout-out to Bea Gardner), "It's Greek to me" "is an idiom in English, expressing that something is not understandable." (Wikipedia)

Again, the nasty headline and tendentious article in 32963 is based on the comments of an admitted non-expert who clearly states that he does not understand the report upon which his statements are based.

As for the mentioned allegations:

1. "marsh water that is overflowing onto environmentally sensitive land to the north that is owned by the Indian River Land Trust." Yes, this

may be true and our County staff has been working on this issue with FDOT, Grand Harbor and the Indian River Land Trust since February of 2016.

2. Supposed disappearing water. Perhaps, but it may just be evapotranspiration and seepage, in any case there is no indication of harm to anyone or anything.
3. A blocked outflow meant to facilitate the flow of water back to the Lagoon. Yes, there is, but our permit with FDEP allows us to use the outfall to the south.
4. Shortly after the facility was constructed the FDEP cited the County for permit infractions for "failure to construct the disposal system at the Spoonbill Marsh site in accordance with the approved design". This is true, but before the facility started operating the "the County suggested, and the State approved, four major additions: a debris screen at the intake point; floating plant maps; oyster seed structures; and sea grass zones".
5. The Spoonbill Marsh "is detrimental to fish and wildlife." This is ludicrous. The mystery report does not even mention fish and wildlife. A pre-construction wildlife survey (not including water dependent species such as fish) identified 17 species on site. A 2013 wildlife survey identified 53 species on-site during the winter survey and 58 species on site during the summer survey.

While the author of the article does mention a number of unsubstantiated rumors, she does not bother to mention that the promulgator of the report was a \$950 Jay Kramer contributor who just a couple weeks prior had a letter of support for Kramer's commission race published in the local paper or that he admittedly did not understand the report that she probably had not read. This is information that was readily available and might have been useful for a reader who wanted to make a fair appraisal of the issues discussed. Is there any wonder that people do not trust the press these days?

If the writer had actually decided to investigate the allegations instead of simply regurgitate them, she might have discovered and then been able to question the apparent author of the report. Mr. Burke did. He examined the electronic file that Shapiro had sent to a member of the press, which was forwarded to the County.

To confirm Mr. Burke's discovery, the file was sent to our Computer Services Manager, Basil D. Dancy.

I will quote from Mr. Dancy's report:

I have been asked to authenticate the identity of the author of a report/presentation referenced by Barry Shapiro in a recent news article questioning the efficacy of a county facility (Spoonbill Marsh). While we have not received a copy of this report directly from Mr. Shapiro (see e-mail dated September 1, 2016), a copy was sent to Mr. Vincent Burke, Director of Utility Services, by Mr. Thomas Hardy on August 26, 2016 (copy attached).

Upon investigation of the file submitted by Mr. Hardy, it is apparent from the properties of the file that it started out as a PowerPoint presentation authored by Mr. Carter Taylor. It was then converted to an Acrobat PDF file on August 25, 2016. These pieces of information are set by the program used when the file is created. The created date references when the file was converted to the PDF format not the original presentation date. We would need to get a copy of the original PowerPoint file to see when it was created but from viewing the PDF file there are dates in the presentation which imply the presentation was created on August 5, 2016. Due to the nature of the PDF file format the information listed cannot be changed after the file is created so no user could alter the data referenced and displayed in the screen shots attached without these changes being readily apparent.

Who is Carter Taylor? The only Carter Taylor I know is a director of the Indian River Neighborhood Association, known as the IRNA. Coincidentally, the IRNA endorsed and contributed to Kramer's campaign. It is also one of Inside Vero's biggest advertisers.

But could the same Carter Taylor actually be the one described as Shapiro as "The author of the report, the whistle-blower, (who) can not come forward..."

The Carter Taylor I know has had a number of conversations with me. The last significant conversation was one he had in my office about the County's proposed short-term rental ordinance. That day he indicated that he was perfectly happy with the direction the Commission was taking. The

Carter Taylor I know could have no realistic fears about coming to any County Commissioner with any information about any County activity.

Yet the IRNA member Carter Taylor who was part of the IRNA review committee, which chose to endorse Jay Kramer over me is the only Carter Taylor I know of in the County. As sad as it is to believe that he was the author of the benighted, scurrilous report, until another Carter Taylor is discovered, I will believe that he and the author of the report are one and the same.

I now draw near, but am not quite at the conclusion.

A number of things are hopefully clear.

The Shapiro report was nothing more than a scurrilous last minute Hail Mary to influence a local county commission race.

The Spoonbill Marsh is not perfect, but it is a great cutting edge project that is, literally, as we sit here, helping to return the Lagoon to a healthier state.

I am proud of this organization for having the guts and foresight to champion the Spoonbill Marsh and I am proud of all the County employees, consultants and contractors who built and operate the facility.

I would like to thank Thomas Hardy, the author and publisher of the Vero Communique for his well-written and researched articles about the Spoonbill Marsh. For anyone interested in the truth I recommend they visit the Vero Communique website and read his Spoonbill Marsh articles. I would also like to thank the Press Journal. The Press Journal received the same information as 32963, but they did not respond like Pavlov's mad dog and immediately regurgitate the Shapiro missive. They did ask me about it during a candidate interview and this was certainly a reasonable and professional approach.

I have come to expect little from the progressive 32963. It is sad that 32963 cannot simultaneously hold onto its progressive ideology and maintain professional standards.

The saddest creature in this whole affair may be the pathetic blogger Mark Schumann, the progressive useful idiot of choice. He does respond like Pavlov's mad dog to anything negative about the County, regardless of

how ridiculous it is.

The best description of Mark Schumann that I have come across is from a book review that I read in the October 1, 2016 Wall Street Journal (page c7):

... as one of his fellow radicals wrote: "Everyone who contradicted him he treated with abject contempt; every argument that he did not like he answered with biting scorn at the unfathomable ignorance that had prompted it, or with opprobrious aspersions upon the motives of him who advanced it."

The book review is about the progressive Karl Marx, but it artfully describes the progressive blogger Mark Schumann.

Marc Schumann calls for civility but is the most uncivil of people.
Schumann calls for truth but is the most disingenuous of bloggers.
Schumann trumpets for tolerance but is the most intolerant of the intolerant strain of modern progressive.

The worst thing about Shapiro's pathetic attempt to try to alter the election with his Spoonbill Conspiracy is that it wastes the time and energy of a lot of good people, time taken away from doing the type of work they like to do, the work of making Indian River County a better place for the people who live and work here.

The good news is that this election season is now over and the Barry Shapiros will disappear, at least for a while.

The better news is that there are few Barry Shapiros and Mark Schumanns in Indian River County. The vast majority of residents are good people doing good things for themselves, their family and their community each day. It is this vast majority of good decent people who have made this a great county, the county that I am happy to live in and proud to serve.

Thank you.

INDIAN RIVER COUNTY
INTER-OFFICE MEMORANDUM

OFFICE OF MANAGEMENT AND BUDGET

TO: Jason Brown
County Administrator

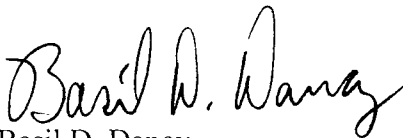
DATE: September 2, 2016

SUBJECT: File Parameters

FROM: Basil D. Dancy
Computer Services Manager

I have been asked to authenticate the identity of the author of a report/presentation referenced by Barry Shapiro in a recent news article questioning the efficacy of a county facility (Spoonbill March). While we have not received a copy of this report directly from Mr. Shapiro (see e-mail dated September 1, 2016), a copy was sent to Mr. Vincent Burke, Director of Utility Services, by Mr. Thomas Hardy on August 26, 2016 (copy attached).

Upon investigation of the file submitted by Mr. Hardy, it is apparent from the properties of the file that it started out as a PowerPoint presentation authored by Mr. Carter Taylor. It was then converted to an Acrobat PDF file on August 25, 2016. These pieces of information are set by the program used when the file is created. The created date references when the file was converted to the PDF format not the original presentation date. We would need to get a copy of the original PowerPoint file to see when it was created but from viewing the PDF file there are dates in the presentation which imply the presentation was created on August 5, 2016. Due to the nature of the PDF file format the information listed cannot be changed after the file is created so no user could alter the data referenced and displayed in the screen shots attached without these changes being readily apparent.


Basil D. Dancy
Computer Services Manager

Basil Dancy

From: Jason Brown
Sent: Tuesday, September 06, 2016 10:46 AM
To: Basil Dancy; Michael Smykowski
Subject: FW: Report

From: Vincent Burke
Sent: Thursday, September 01, 2016 12:01 PM
To: Jason Brown <jbrown@ircgov.com>
Cc: Dylan Reingold <dreingold@ircgov.com>
Subject: FW: Report

FYI. I have been unable to obtain a copy of the report. Please see below.

From: Barry Shapiro [<mailto:barry.nohhands@gmail.com>]
Sent: Thursday, September 01, 2016 10:37 AM
To: Vincent Burke <vburke@ircgov.com>
Subject: Re: Report

Vincent,

I have spoken with the key authors of the report and at this time they have asked me not to send the report directly to you. This is the response I received from them:

Tell him that (1) we cooperating with the EPA and (2) there is regulatory action pending, and potentially litigation. (3) Our attorney has advised us not to talk with anyone who is the potential subject of the investigation. (4) EPA may choose to share this information with them. Their prerogative.

I would (5) urge the Board of County Commissioners to launch an independent investigation and forensic audit of data collection methods, analysis, and reporting by a nationally-recognized environmental consulting firm. (6) They need to fess up -- they know whats going on over there. We will back off only if they come clean.

I assume they by "they", they mean the County Commissioners.

Sorry for the delay in getting back to you but I was waiting on their response. I realize this is not the response you are looking for but this is how it is at this time.

Respectfully,
Barry

On Tue, Aug 30, 2016 at 7:09 PM, Vincent Burke <vburke@ircgov.com> wrote:

Good evening Barry,

Were you able to send the report?

Thank you,
Vincent

From: Barry Shapiro [mailto:barry.nohhands@gmail.com]
Sent: Tuesday, August 23, 2016 10:21 PM
To: Vincent Burke <vburke@ircgov.com>
Subject: Re: Report

I will have everything ready for you in the next couple of days. I am happy to share what information I have

Thank you for contacting me.

Barry

On Tuesday, August 23, 2016, Vincent Burke <vburke@ircgov.com> wrote:

Good afternoon!

I have been forwarded a copy of your email with respect to Spoonbill Marsh. While the County is very proud of the thousands of pounds of dissolved nutrients that have been removed at the site since 2010, it comes to us as a surprise that there could be some issues with the operation and performance of this site. Your email mentioned that you have an "in depth report" about the site and we would be interested in reading the information it contains so that we can understand more about this issue. If there is something amiss about our ability to comply with the Florida Department of Environmental Protection permit requirements, we want to know about it. I understand that you do not wish to divulge your source, but let us know if you can submit an electronic version (reply to this email with the attachment) or drop a hard copy at the address below:

Indian River County

Utilities Department

1801 27th Street, Building A

Vero Beach, FL 32960

Thank you,

Vincent Burke, P.E.

Utilities Director, Indian River County

1801 27th Street

Vero Beach, FL 32960

T: 772.226.1830 F: 772.770.5143

vburke@ircgov.com

Please consider the environment before printing this email

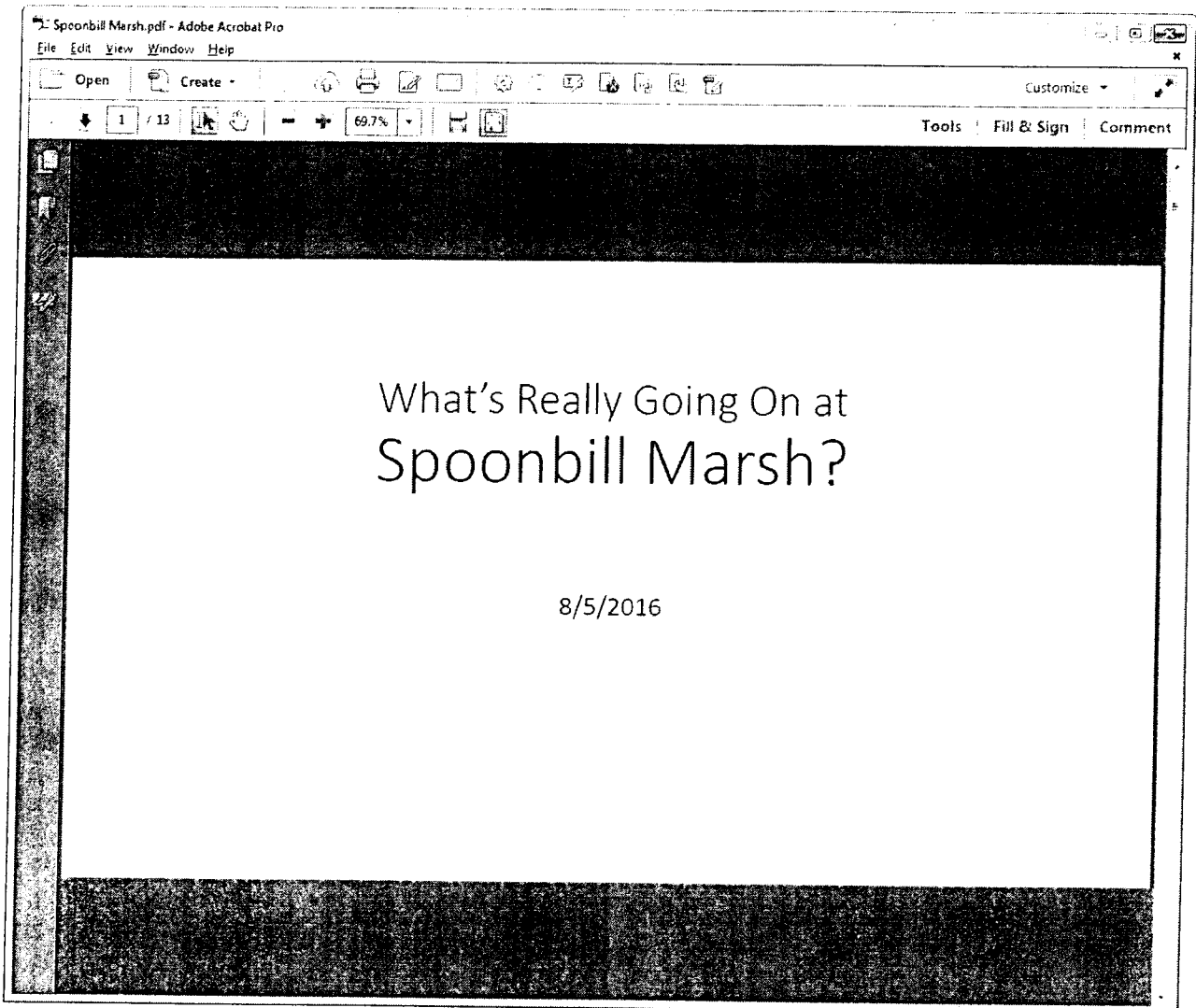
Basil Dancy

From: Vincent Burke
Sent: Monday, August 29, 2016 8:44 AM
To: Basil Dancy
Subject: FW: Revised Press release
Attachments: Spoonbill Marsh.pdf

Basil, Can you verify the author of this file?

From: Thomas Hardy [mailto:hardythomast@gmail.com]
Sent: Friday, August 26, 2016 3:32 PM
To: Vincent Burke <vburke@ircgov.com>; robert solari <daidalos1184@gmail.com>; Ecotech <ecotech@bellsouth.net>
Subject: Fwd: Revised Press release

FYI again.



What's Really Going On at Spoonbill Marsh?

8/5/2016

Document Properties



Description Security Fonts Initial View Custom Advanced

Description

File: Spoonbill Marsh.pdf

Title: PowerPoint Presentation

Author: Carter Taylor

Subject:

Keywords:

Created: 8/25/2016 3:28:51 PM

Additional Metadata...

Modified: 8/25/2016 3:28:51 PM

Application: Microsoft® PowerPoint® 2016

Advanced

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File Size: 2.10 MB (2,199,460 Bytes)

Page Size: 13.33 x 7.50 in

Number of Pages: 13

Tagged PDF: Yes

Fast Web View: No

Help

OK

Cancel

What's Really Going On at Spoonbill Marsh?

8/5/2016

Summary of issues

- Self-reported, unaudited Discharge Monitoring Reports (DMRs) filed by the County fail to reconcile the difference between inputs to (2.99mgd), and outputs from (2.28mgd*) Spoonbill Marsh
- Site visits indicate that output from Spoonbill Marsh to the Indian River Lagoon is significantly less (0.65mgd) than that reported to FDEP (2.99mgd)

*(mgd is millions of gallons per day)

- Several Questions:
 - Why doesn't the county meter the discharges, as required in the permit, which would have an audit trail?
 - Where is all this missing wastewater going?
 - Why has this gone unreported to authorities?
 - When given Notice, why has the County done nothing to fix or report this?

Accountability for Wastewater

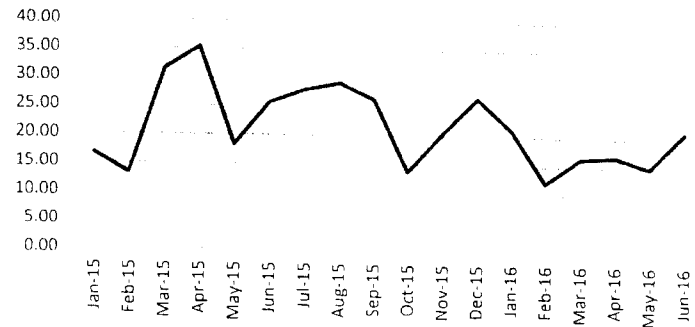
FL-0166511 IRCUD North County Demin. Concentrate ("Spoonbill Marsh")
 Total Flows (Millions of Gallons per Month)

Days	(A)	(B)	(A)+(B)	(C)	A)+(B)-(C)	(D)	(C)-(D)	
	INF-03	INT-03	INF-03 + INT-03	EFF-03	INF <> EFF- Variance	WIM-02	EFF-03 - Variance	
	Demineralization Concentrate	Intake Water from the River		Blended Effluent Discharges				
Jan-15	31	27.34	58.44	85.78	84.85	0.93	68.20	16.65
Feb-15	28	22.68	41.33	64.01	64.12	(0.11)	50.96	13.16
Mar-15	31	27.99	32.64	60.64	61.01	(0.37)	29.55	31.45
Apr-15	30	36.27	37.29	73.56	73.56	-	38.22	35.34
May-15	31	41.88	41.14	83.02	83.02	-	64.79	18.23
Jun-15	30	39.00	71.10	110.10	110.58	(0.48)	84.90	25.68
Jul-15	31	39.93	84.69	124.62	124.62	-	96.72	27.90
Aug-15	31	37.98	90.99	128.96	128.96	-	99.82	29.14
Sep-15	30	35.28	88.89	124.17	123.87	0.30	97.50	26.37
Oct-15	31	37.63	50.22	87.85	87.85	-	74.09	13.76
Nov-15	30	37.68	61.35	99.03	99.03	-	78.60	20.43
Dec-15	31	42.19	57.35	99.54	99.51	0.03	72.85	26.66
Jan-16	31	38.58	74.39	112.97	112.97	0.00	91.85	21.12
Feb-16	29	36.32	22.74	59.06	59.06	0.00	46.99	12.07
Mar-16	31	42.72	34.74	77.46	77.47	(0.00)	61.13	16.34
Apr-16	30	42.37	32.15	74.52	74.51	0.01	57.67	16.84
May-16	31	42.37	28.54	70.91	70.92	(0.01)	55.97	14.95
Jun-16	30	42.36	55.93	98.29	98.29	-	77.17	21.12
Avg	547	670.58	963.91	1,634.49	1,634.19	0.30	1,246.98	387.21
		1.23	1.76	2.99	2.99	0.00	2.28	0.71

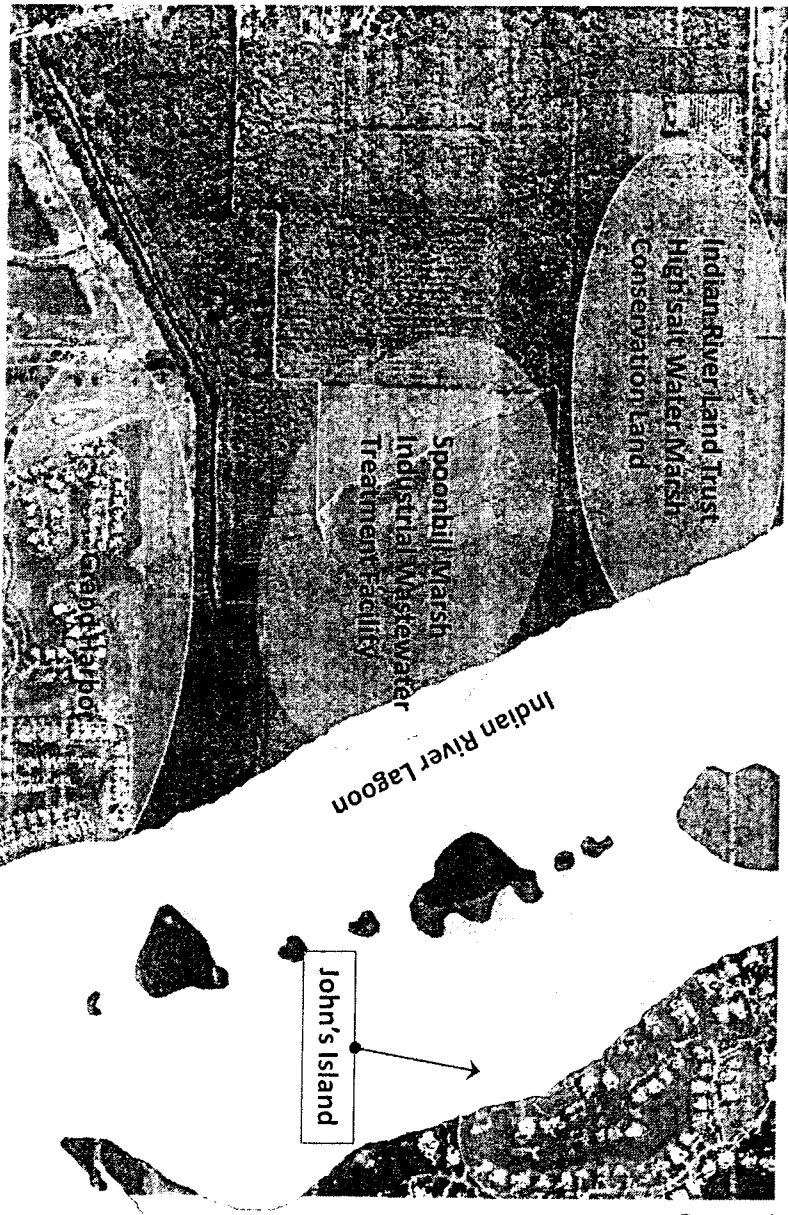
Difference Between

- What goes IN and
- What goes OUT (Should average Zero)

Spoonbill Marsh
 "Officially" Unaccountable Wastewater
 Millions of Gallons Per Month
 Self-Reported, Unaudited
 January, 2015 - June, 2016

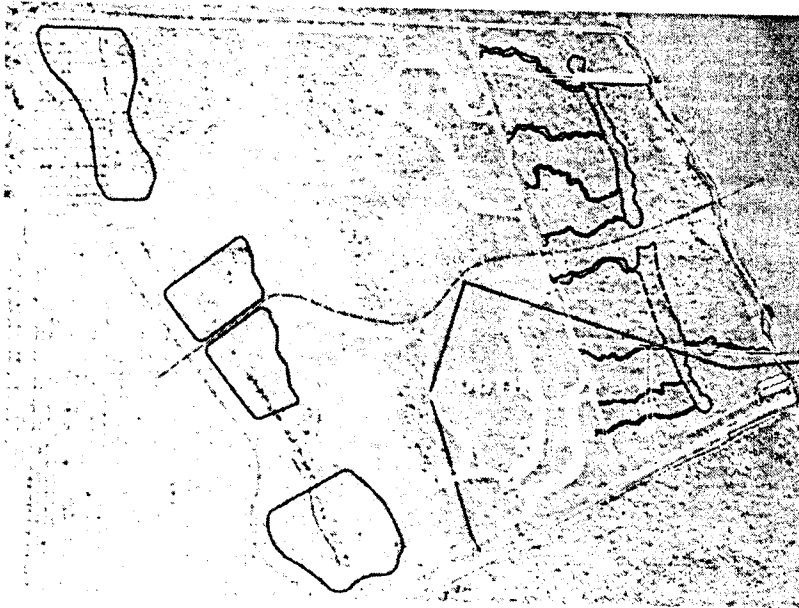


Context

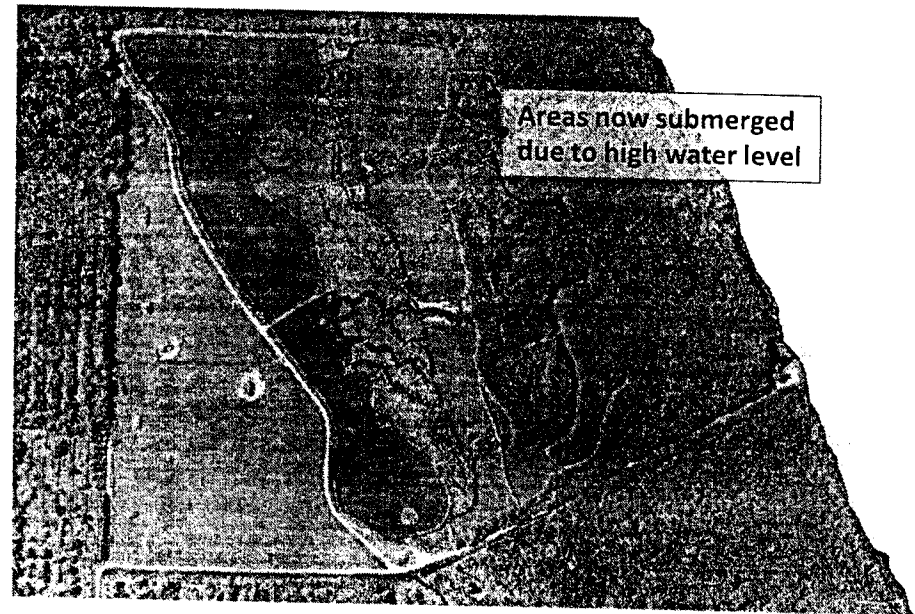


Original Design and 2015 DOT Aerial

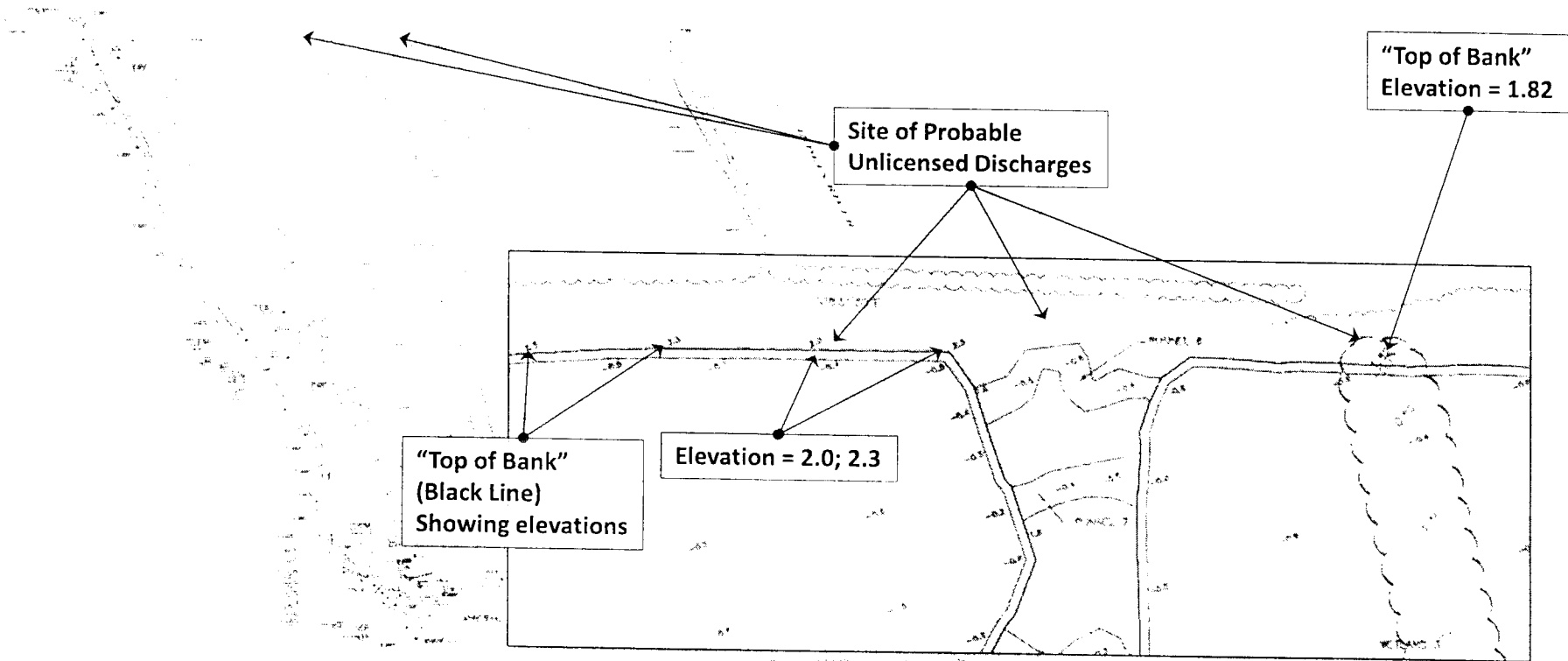
Prior to Construction



DOT, 2015



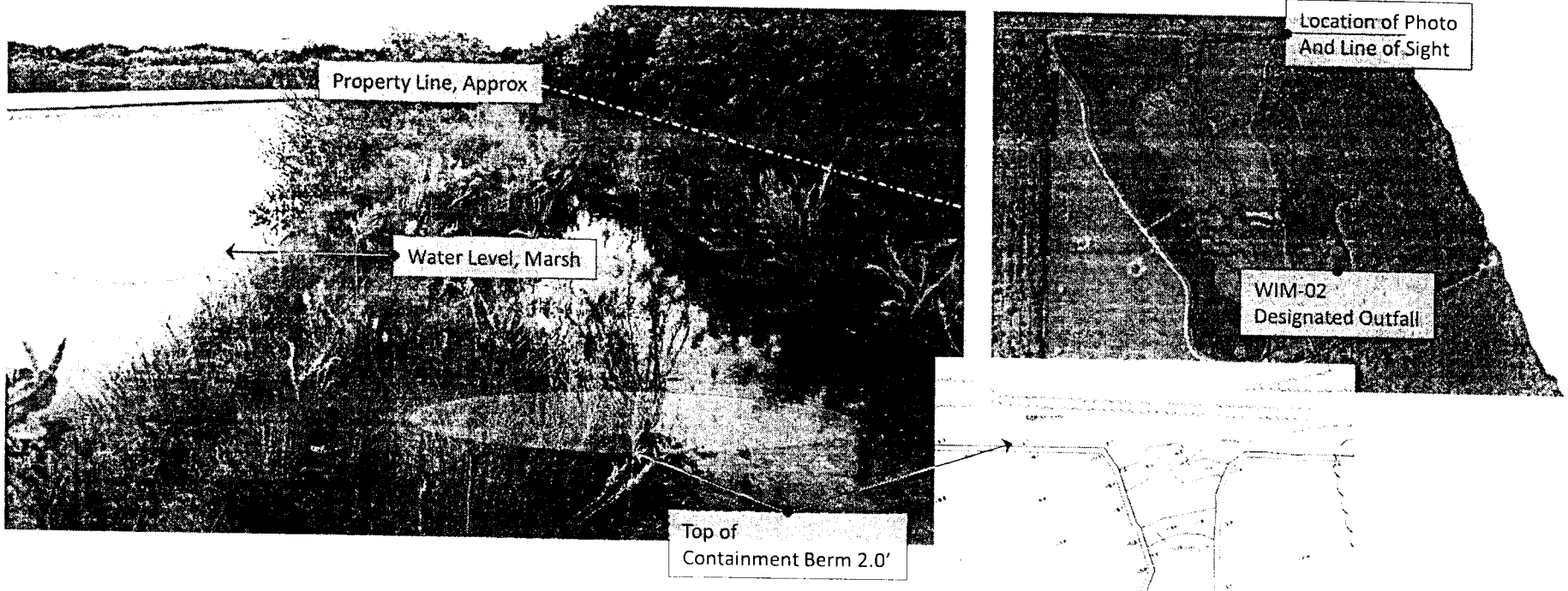
As-built showing elevations of containment



Site of Probable Unlicensed Discharge

8/5/2016

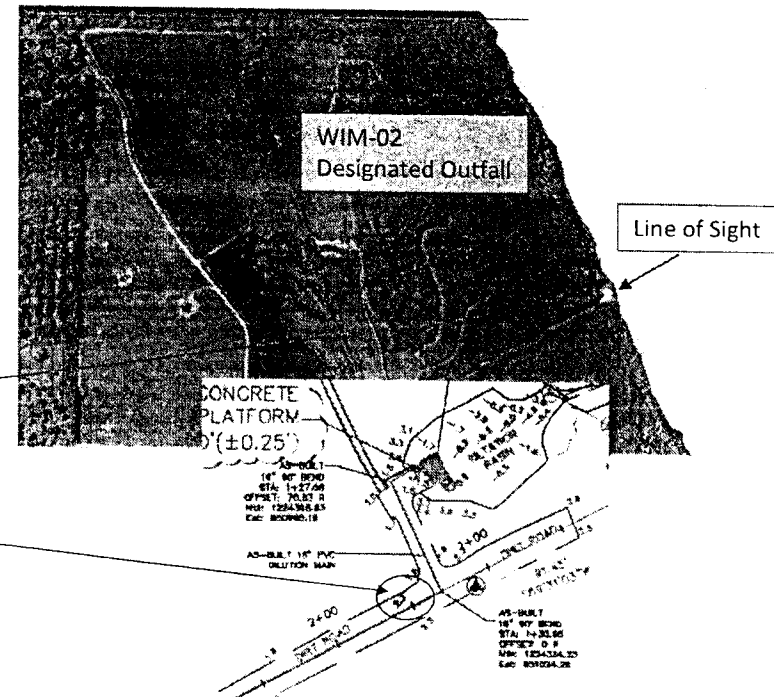
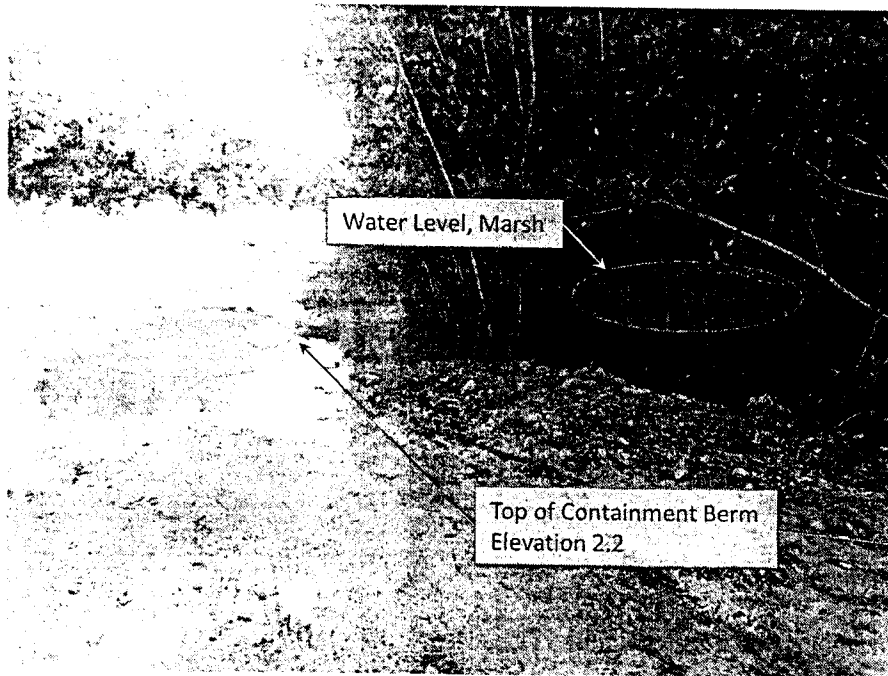
DOT, 2015 Context



Water elevation is approximately 2 feet above design level

8/5/2016

DOT, 2015 Context

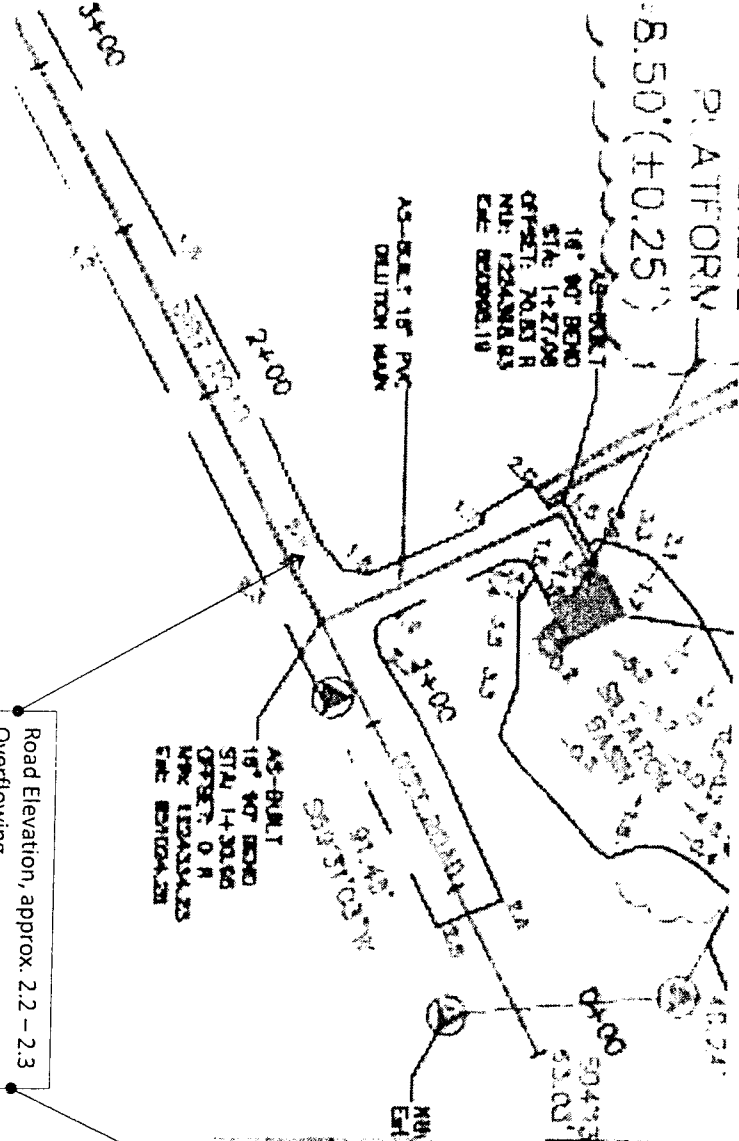


8.50' (+0.25')

PLATFORM

AS-BUILT
18" WOT BEND
STA: 1+27.00
OFFSET: 70.00 R
MID: 122.4000
ELEV: 82.0000

AS-BUILT 18" PVC
DELITON MAIN



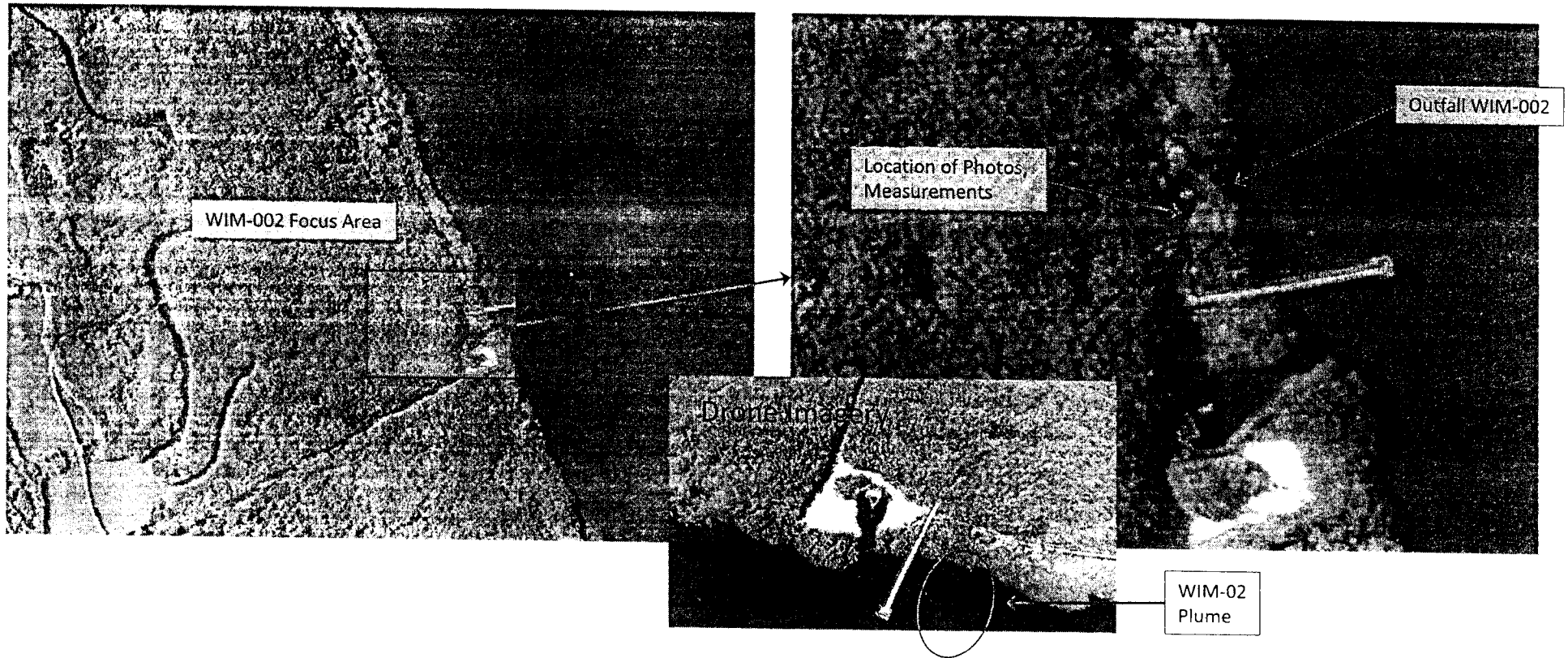
AS-BUILT
18" WOT BEND
STA: 1+30.00
OFFSET: 0 R
MID: 122.4000
ELEV: 82.0000

Road Elevation, approx. 2.2 - 2.3
Overflowing



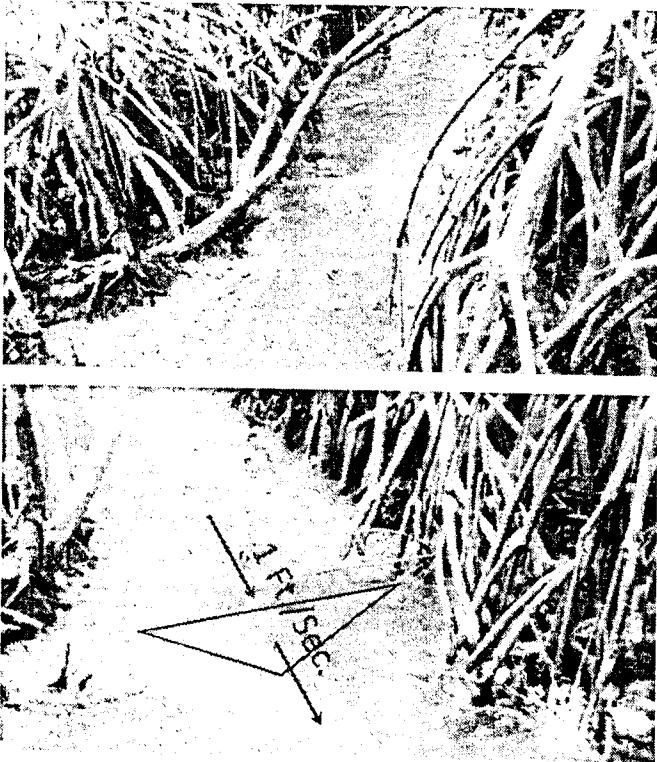
WIM-02 Outfall

DOT, 2015

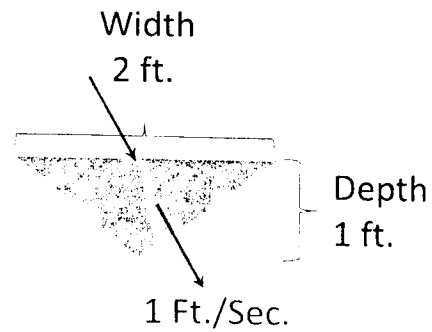


WIM-02 Outfall

Frames from Video Shoot, 8/5/2016



**Observed
Cross-Section and
Flow Rate of WIM-02**



Area Velocity Method of Estimate

$$\begin{aligned} & \times 1' / \text{sec.} \\ & \times 3,600 \text{ sec/hr.} \\ & \times 24 \text{ hr/day} \\ & = 86,400 \text{ cubic ft./day} \\ & = 646,300 \text{ gal./day} \end{aligned}$$

Tentative Conclusions

- Facility not built to Permit Requirements
 - Containment structure incomplete
 - Outfalls WIM-01, WIM-02 not metered, as required
- Facility not Operated according to Permit Design
 - Lack of Maintenance
 - Silting, dead oysters affect residence time of effluent
 - Increase in water elevation
 - Closure of WIM-01 Outfall
 - Improper operation
 - Water elevation overtopping containment
 - Marsh submerged
 - Wastewater lost through unlicensed discharge
 - Outfall volumes estimated rather than metered

Tentative Consequences

- Failure to Satisfy Operating Permit Conditions
 - Failure to account for rainfall, evaporation, seepage
 - Failure of affirmative duty to reconcile, explain difference between volumes metered at EFF-03 and estimated at WIM-02 (0.71 mgd, Jan, 2015-June, 2016 baseline)
 - Failure to perform affirmative duty to notify FDEP of unauthorized discharges
- Falsification of Outfall WIM-02 Estimates
 - Lack of metering WIM-02 as required under permit reporting requirements
 - Robustness of Estimated Volumes not auditable, veracity questionable.
 - Volumes observed at WIM-02 designated outfall, 0.646mgd, 25%-30% of average reported 2.28mgd at WIM-02.
- **Bottom Line:**
 - **2.34mgd unexplained** (0.71mgd unaccounted + 1.63mgd inflated WIM-02 estimates)
 - 78% of the average input volume of 2.99mgd is unexplained.
 - Only 22% of volume is being treated as permitted.
 - **Operator has willfully failed their duty to know and report these failures and inaccuracies, and in fact has engaged in a scheme to mislead regulators and the public.**

Main menu

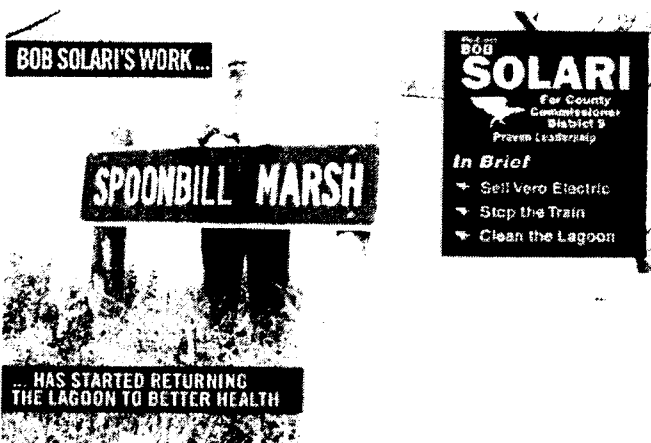
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August 19, 2016

What is really going on at Spoonbill Marsh? ³

by [Mark Schumann](#) • [Indian River County](#), [Indian River Lagoon](#)

MARK SCHUMANN



County Commissioner Bob Solari, who is running for re-election, has made the effectiveness of Spoonbill Marsh an issue in his campaign, bragging in campaign mailers to be the driving force behind the wastewater treatment facility.

Earlier this week, *Inside Vero* submitted a public records request to the County Attorney's Office seeking copies of written correspondence and calendar evidence of meetings between County Commissioners and County Staff and representatives of the Indian River Land Trust regarding the possible flow of brine-contaminated water from the County's Spoonbill Marsh wastewater treatment facility onto adjacent Land Trust property. No one at the County Attorney's office is available to address our public records request until after Aug. 24.

Land Trust Executive Director Ken Gruden did not return our call, and no one at the Land Trust appears willing at this point to speak on the record. One Land Trust staff member did ask us to "please" follow up with him after receiving the County's response to our public records request.

Yesterday, Barry Shapiro, a concerned citizen, distributed the following email raising his concerns about a possible cover up of issues at Spoonbill Marsh.

From: **Barry Shapiro**

Date: Thu, Aug 18, 2016 at 10:14 AM

Subject: Important information for anyone who cares about our environment.

About a week ago I was asked to attend a meeting here in Vero Beach and at that time asked not to tell anyone about the meeting or it's attendees. Given we are in the middle of a heated political campaign here in Indian River County, I expected this to have something to do with a candidate I am supporting. At this time I cannot tell you who was in this meeting however I can tell you that as the information was presented to the group I went into a state of shock. Our most important economic and ecological asset, the Indian River Lagoon, is being destroyed by pollution, a fact that anyone who lives in our area surely is aware of. What is generally not known is that **one of the prime polluters of the Lagoon is our own county government.**

There is a scandal being perpetrated that no one is willing to talk about. This information is confirmed by leading scientists and environmentalists and yet the local media has not only not been made aware of the situation but in some cases where they have been tipped off they are burying the story until after the election. Most of our local media have endorsed both incumbents Bob Solari and Tim Zorc to return to the County Commission despite their false and misleading statements about just what the county is doing. I believe they are suppressing this story because they don't want to look like schmucks just a couple of weeks after endorsing people who may possibly be committing criminal acts.

I left that meeting angry as hell and determined to do something about it. I was invited because of my media background, as someone they felt could help get the word out. And yet even now, some of the people in this meeting have since been unwilling to go on the record – afraid of making a false move that could come back on them before the election. I have no such fear. I am not a politician or a journalist. I answer to no one but my own code of ethics. There are two issues that I care deeply about and place above all others: education and the environment. On this issue I feel I cannot sit still and wait to see what happens. At the risk of offending some people I am starting the process of letting everyone possible know about what I have learned. Frankly I don't give a (expletive) about what anyone else thinks.

As you will read in my attachment, I believe that our elected county officials are at the very least deceiving the public. I believe that by not reporting truthfully to the DEP they are doing something illegal but that will be for the courts to decide. I have been told by people smarter than me that their actions may be prosecutable.

The author of the report, the whistle-blower, cannot come forward and so I am committed to never revealing my source. I will tell you that I have already spoken to someone in a better position to know about this and that person indicated that he/she was in agreement that this is factual and needs to be brought to the public's attention. If this is a scandal of the proportions I believe it is, some people could lose their jobs. This is one reason that some feel we should hold back the information for now. I believe that we need to put all the cards on the table and come what may. This is bigger than an election or some people's feelings. This is about our future and our children's future and their children's future.

The attachment is merely an explanation of the basic problem at Spoonbill Marsh. It only scratches the surface. I have in my possession a more in-depth report that will be delivered to all media outlets as well as appropriate government agencies in the next 2 days. Once this hits I hope to arrange TV, radio, print media interviews with experts who can back this report up.

The IRL is the lifeblood of this county's economic health. It is also one of the most significant environmental bodies of water on the east coast affecting everything from the fishing industry to migratory patterns of important species.

We all know that the lagoon is dying. Here is something we can do about it. I ask that you read this attachment. If it resonates with you – no matter what side of the political spectrum you are on – I ask you to please get the word out – via email, social media, letter campaigns and phone calls. Talk about this with everyone! If you want to read the report I will make it available to you. It's Greek to me but maybe you can decipher it.

Clearly I have a political ax to grind. I admit it. I attended last night's candidate forum in Sebastian with the intention of divulging this information but the group I am with felt it was not the time or place to do so. Still, when I heard the BS being told the public I left angrier than ever and I am just not willing to hold back until "all the ducks are in a row." I'd rather err by speaking too soon than speaking too late.

If you have any contacts at the DEP at the state or federal level I ask you to please help me get the report to them.

I thank you for your time and patience. I know this is very long winded but I have the need to be clear and specific.

I know everyone on the list this is going out to personally and I know that no matter who you are supporting in this election you will see that this is so important it supersedes politics. I am asking you to help this message go viral. We need the public to know and to act now!

I appreciate your support.

Barry Shaprio

PS: To residents of John's Island, Windsor and the Moorings, you are the largest contributors to the Indian River Land Trust and to the political campaigns of several prominent district politicians. **Be clear that in regards to the Indian River Lagoon cleanup you have been LIED TO! Now what?**

Shapiro's email included the following attachment:

SPOONBILL MARSH FACT SHEET

The following points are facts supported by scientific evidence. What is clear is that the County and its officers have invested so heavily in the marsh system and have lied to the public about its effectiveness.

We do not attempt to address potential problems with Osprey Marsh or Egret Marsh, but we do know that these have reporting issues as well.

The bottom line is that Spoonbill Marsh, which is in reality a liquid toxic waste dump, is not operating as designed or permitted.

When properly investigated by an independent agency, this should be grounds for legal action to stop illegal discharges of toxic and untreated wastewater.

County Commission chairman Bob Solari has aggressively defended the marsh system and is currently basing his re-election campaign on the benefits to the county these marshes provide. Clearly this is disinformation at best.

Salient points:

- Spoonbill Marsh is not properly functioning and not being properly maintained by the county,

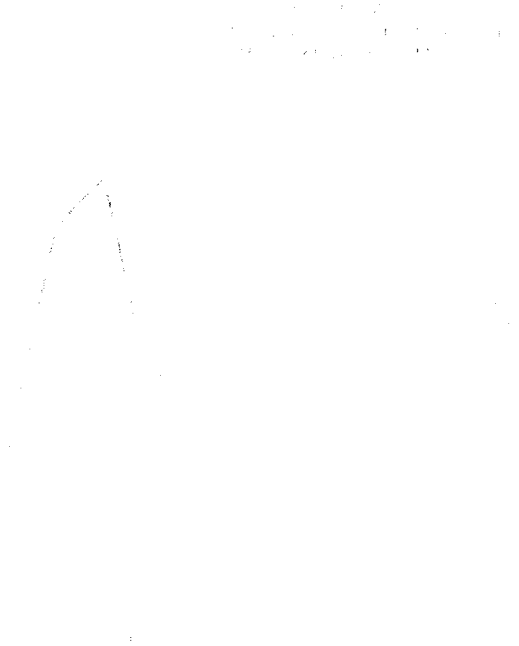
specifically as to how it collects and reports data.

- On the record, based on the official self-reported and unaudited DMR figures from January, 2015 to June, 2016, Spoonbill takes in on average 2.99 million gallons per day of toxic brine and water from the Indian River Lagoon. The number can vary somewhat according to weather and other factors.
- Approximately 0.5 to 1.0 million gallons run out of Spoonbill a day. IRC claims that an average of 2.28 million gallons is pumped out but their figures are contradicted by site visits by experts. The county doesn't have a system in place to meter the outfall, as required by the permit, so they go by their

own best estimate.

- Given this disparity, approximately 2.0 to 2.5 million gallons of effluent (untreated wastewater) is unaccounted for every day. That totals almost 1 billion gallons unaccounted for each year.
- The county audits itself and reports its findings to the DEP. By the county's self-audit report no missing water has ever been reported giving the appearance of a "don't ask, don't tell" policy between the DEP and the County. This 'tacit agreement' between the county and the DEP has been going on since Spoonbill's inception.
- By design there should be 2 outfalls for Spoonbill water. As per independent site inspection, only one outfall is in use. The other to the north has apparently not worked for years. Therefore all effluent MUST go through the one functioning outfall. As a condition of the permit all discharges must go through these outfalls. Obviously the majority of this unaccounted for water is going somewhere else.
- The difference in the amount of input and outfall cannot be accounted for by evaporation leaving the question "where is this water going?"
- A 1 inch rainfall adds about 1.8 million gallons to the unaccountable wastewater volume.
- IRC is operating Spoonbill Marsh in flagrant violation of its permit.
- IRC is misreporting Spoonbill's outfall by millions of gallons a day.

The following graph shows the amount of wastewater the county acknowledges is unaccountable:



These are supportable facts. There is also much anecdotal evidence to support our claims:

- According to one expert witness, the Indian River Land Trust has been aware of overflow from Spoonbill entering abutting IRLT property but has never known the extent of the spill.
- Site visits by experts that were recorded on video show that the measured outfall rate (area-velocity method of measurement) for a 24 hour period only comes to 646,317 gallons. This falls far short of the amount reported by the county. It is a simple measurement because the outfall is just a trench that is approximately 2' wide and 1' deep.
- Observers standing atop the weir (containment berm) clearly saw that Spoonbill's water level was over the top of the weir and flowing onto neighboring property. Photographic evidence of this is available upon request. The licensed design does not permit the facility to operate with a water elevation that overtops the containment.
- It is possible that certain media outlets are aware of these facts but are burying this story until after the coming county elections. If true this would clearly indicate a potential conflict of interest.

This table explains the officially self-reported, unaudited waste water volumes going into and out of Spoonbill Marsh along with unaccountable differences.

The figures are in millions.

FL 0166511 IRCUD North County Demin. (Concentrate ("Spoonbill Marsh"))

Average F Total Flows (MGD) Per Month

Days	(A)	(B)	(A) + (B)	(C)	(A)-(B) [(C)-(D)]	(D)	(C) - (D)	
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	Deminer alization Concentr ate	intake Water from the River		Blended Effluent Discharges				
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Jun-16	30	42.36	55.93	98.29	98.29	-	77.17	21.12
	547	670.58	963.91	1,634.49	1,634.19	0.30	1,246.96	387.21
Avg		1.23	1.76	2.99	2.99	0.00	2.28	0.71

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3 comments

1. [Cathy Katrovitz](#) says:
[August 19, 2016 at 3:52 pm](#)

It is outrageous that public records requests – particularly of such significance – would not be readily available...unless there really IS something to hide. Come on, County leaders! If this is all true, there may be heads rolling before it's over (not literally--but we citizens demand the truth).

2. [beagardner](#) says:
[August 19, 2016 at 5:41 pm](#)

Bob Solari and all of the current elected County Commissioners should be brought to task on this one. They have been fooling the public for far too long and this commission needs new blood. While they seem to be in love with a sale that cannot and will not take place they are ignoring the real issues and the Spoonbill Marsh is just one example. Not supporting the Lagoon Council is another mis-step with this current Commission. During this election cycle it is time to replace Bob Solari and Tim Zorc. The Press Journal has it all wrong....but then again they are the FPL paper and that is why a dead sale is the whole reason for these two bad endorsements.

3. *John E Church* says:
[August 19, 2016 at 9:39 pm](#)

Perhaps it will be necessary to contact the attorney general of the state or the DEP in Washington. This is a serious matter that needs to be exposed to the general public and corrected ASAP. If it is true that this may be a criminal matter it must be pursued to the end.

Comment - Please use your first and last name. Comments of up to 350 words are welcome.

Enter your comment here...

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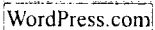
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- Jeanette White on [Shores strong men descend on Vero Beach](#)

Barry Shapiro

1548 Par Court Vero Beach, FL 32966

917-225-1231 cell barry.nohhands@gmail.com

August 20, 2016

To whom it may concern:

My name is Barry Shapiro. I am not a politician, scientist, environmentalist or an expert in any way when it comes to the important issues of our ecology. I am a concerned citizen who has come across what I believe is important information about malfeasance by our County Commissioners and the damage being done to important ecological expanses in Indian River County where I live. I am passing along to you what I believe to be vital information about an environmental disaster taking place at the Spoonbill Marsh water treatment facility operated by the county. This report has come to me through a source that wishes to remain anonymous. I have been led to believe this is not only an environmental tragedy but also a potentially criminal cover-up of the truth by our county officials.

In addition to the report I am submitting, Spoonbill is having a negative impact on fish breeding and surrounding native flora. Spoonbill is not functioning as a native wetland and is not functioning as it was designed to do. Despite the protestations of many scientific and environmental experts the county officers went to get expense to create the 3 marshes that treat waste water in the county. I believe that now they will do anything to cover up the fact that they were wrong.

I am requesting that you look at the enclosed materials to determine if an independent review of the facility is warranted. If the information is correct I believe you will find ample reason to investigate for yourself. I am also led to believe by reliable sources that this information just scratches the surface of what is going on at the marsh facilities. This report has been shown to a creditable group of environmentalists and scientists who concur with its content.

In addition there is ample anecdotal evidence to spur an independent audit of the marshes. For the purpose of this report I will stick to the known facts about Spoonbill Marsh. The attached document is an overview I have written with bullet points to highlight our case. The in-depth, detailed report is available upon request. We also have photographic and video evidence to support our claims that is available as well.

I respectfully await your response. I am available at your convenience to discuss this report and anything else related to the catastrophe that is Spoonbill Marsh.

Sincerely,

Barry Shapiro

SPOONBILL MARSH FACT SHEET

The following points are facts supported by scientific evidence. What is clear is that the County and its officers have invested so heavily in the marsh system and have lied to the public about its effectiveness.

We do not attempt to address potential problems with Osprey Marsh or Egret Marsh, but we do know that these have reporting issues as well.

The bottom line is that Spoonbill Marsh, which is in reality a liquid toxic waste dump, is not operating as designed or permitted.

When properly investigated by an independent agency, this should be grounds for legal action to stop illegal discharges of toxic and untreated wastewater.

County Commission chairman Bob Solari has aggressively defended the marsh system and is currently basing his re-election campaign on the benefits to the county these marshes provide. Clearly this is disinformation at best.

Salient points:

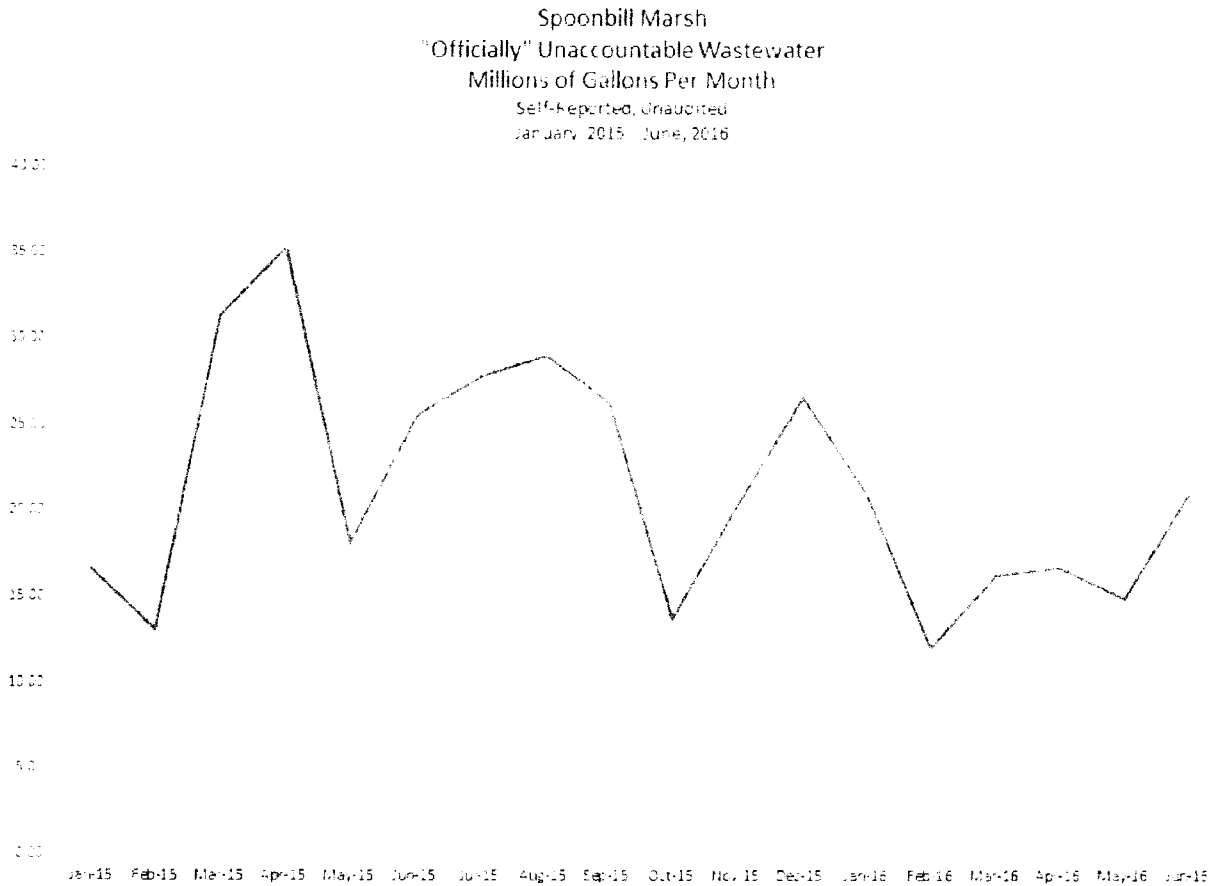
- Spoonbill Marsh is not properly functioning and not being properly maintained by the county, specifically as to how it collects and reports data.
- On the record, based on the official self-reported and unaudited DMR figures from January, 2015 to June, 2016, Spoonbill takes in on average 2.99 million gallons per day of toxic brine and water from the Indian River Lagoon. The number can vary somewhat according to weather and other factors.
- Approximately 0.5 to 1.0 million gallons run out of Spoonbill a day. IRC claims that an average of 2.28 million gallons is pumped out but their figures are contradicted by site visits by experts. The county doesn't have a system in place to meter the outfall, as required by the permit, so they go by their own best estimate.
- Given this disparity, approximately 2.0 to 2.5 million gallons of effluent (untreated wastewater) is unaccounted for every day. That totals almost 1 billion gallons unaccounted for each year.
- The county audits itself and reports its findings to the DEP. By the county's self-audit report no missing water has ever been reported giving the appearance of a "don't ask, don't tell" policy between the DEP and the County. This 'tacit agreement' between the county and the DEP has been going on since Spoonbill's inception.
- By design there should be 2 outfalls for Spoonbill water. As per independent site inspection, only one outfall is in use. The other to the north has apparently not worked for years. Therefore all effluent MUST go through the one functioning outfall. As a condition of the permit all discharges must go through these outfalls. Obviously the majority of this unaccounted for water is going somewhere else.
- The difference in the amount of input and outfall cannot be accounted for by evaporation leaving the question "where is this water going?"
- A 1 inch rainfall adds about 1.8 million gallons to the unaccountable wastewater volume.

- IRC is operating Spoonbill Marsh in flagrant violation of its permit.
- IRC is misreporting Spoonbill's outfall by millions of gallons a day.
-

These are supportable facts. There is also much anecdotal evidence to support our claims:

- According to one expert witness, the Indian River Land Trust has been aware of overflow from Spoonbill entering abutting IRLT property but has never known the extent of the spill.
- Site visits by experts that were recorded on video show that the measured outfall rate (area-velocity method of measurement) for a 24 hour period only comes to 646,317 gallons. This falls far short of the amount reported by the county. It is a simple measurement because the outfall is just a trench that is approximately 2' wide and 1' deep.
- Observers standing atop the weir (containment berm) clearly saw that Spoonbill's water level was over the top of the weir and flowing onto neighboring property. Photographic evidence of this is available upon request. The licensed design does not permit the facility to operate with a water elevation that overtops the containment.
- It is possible that certain media outlets are aware of these facts but are burying this story until after the coming county elections. If true this would clearly indicate a potential conflict of interest.

The following graph shows the amount of wastewater the county acknowledges is unaccountable:



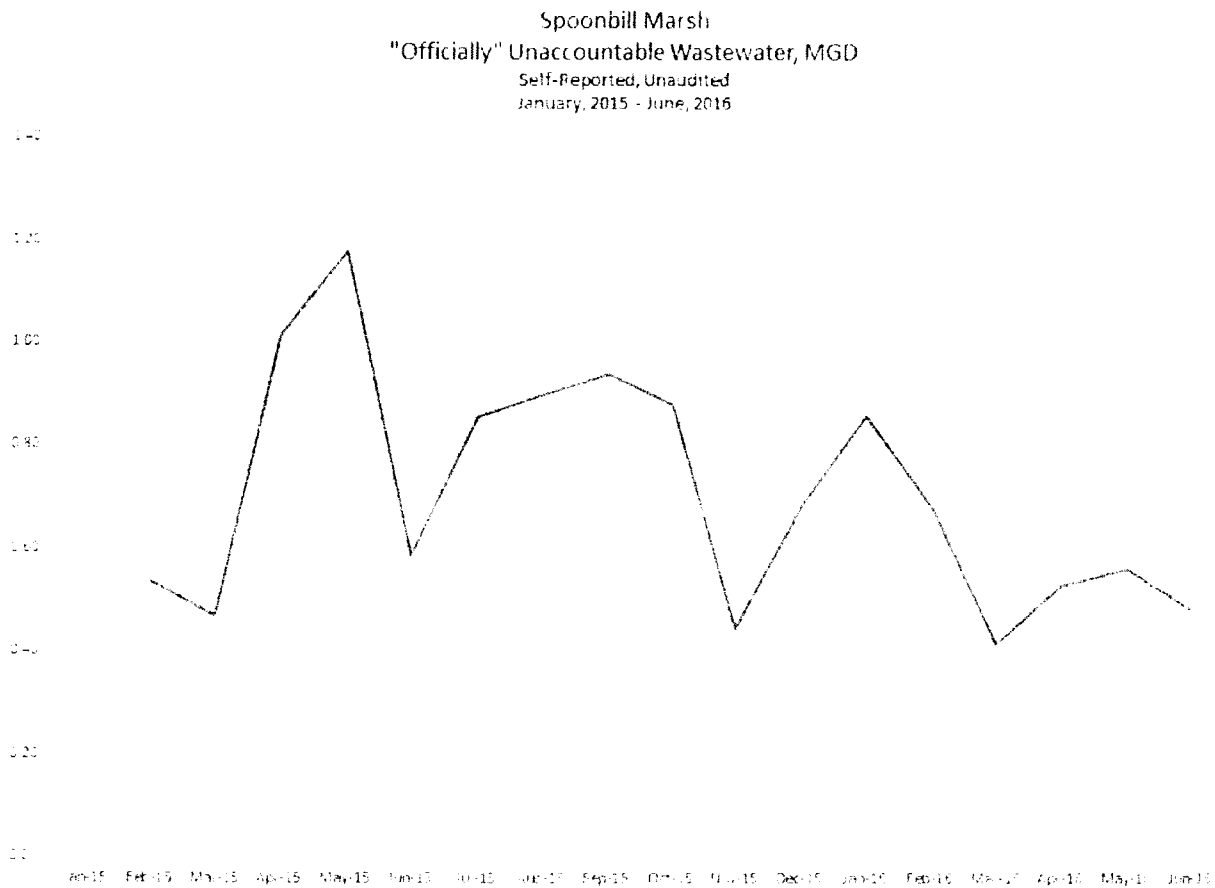
This table explains the officially self-reported, unaudited waste water volumes going into and out of Spoonbill Marsh along with unaccountable differences.
The figures are in millions.

FL-0166511 IRCUD North County Demin. Concentrate ("Spoonbill Marsh")

Average F Total Flows (MGD) Per Month

	Days	(A)	(B)	(A)+(B)	(C)	A)+(B)-(C)	(D)	(C)-(D)
		INF-03	INT-03	INF-03 +	EFF-03	Variance	WIM-02	Variance,
		Demineralization Concentrate	Intake Water from the River	INT-03	Blended Effluent Discharges	INF <> EFF-		EFF03 -
Jan-15	31	27.34	58.44	85.78	84.85	0.93	68.20	16.65
Feb-15	28	22.68	41.33	64.01	64.12	(0.11)	50.96	13.16
Mar-15	31	27.99	32.64	60.64	61.01	(0.37)	29.55	31.45
Apr-15	30	36.27	37.29	73.56	73.56	-	38.22	35.34
May-15	31	41.88	41.14	83.02	83.02	-	64.79	18.23
Jun-15	30	39.00	71.10	110.10	110.58	(0.48)	84.90	25.68
Jul-15	31	39.93	84.69	124.62	124.62	-	96.72	27.90
Aug-15	31	37.98	90.99	128.96	128.96	-	99.82	29.14
Sep-15	30	35.28	88.89	124.17	123.87	0.30	97.50	26.37
Oct-15	31	37.63	50.22	87.85	87.85	-	74.09	13.76
Nov-15	30	37.68	61.35	99.03	99.03	-	78.60	20.43
Dec-15	31	42.19	57.35	99.54	99.51	0.03	72.85	26.66
Jan-16	31	38.58	74.39	112.97	112.97	0.00	91.85	21.12
Feb-16	29	36.32	22.74	59.06	59.06	0.00	46.99	12.07
Mar-16	31	42.72	34.74	77.46	77.47	(0.00)	61.13	16.34
Apr-16	30	42.37	32.15	74.52	74.51	0.01	57.67	16.84
May-16	31	42.37	28.54	70.91	70.92	(0.01)	55.97	14.95
Jun-16	30	42.36	55.93	98.29	98.29	-	77.17	21.12
	547	670.58	963.91	1,634.49	1,634.19	0.30	1,246.98	387.21
Avg		1.23	1.76	2.99	2.99	0.00	2.28	0.71

This graph shows millions of gallons a day unaccountable, averaging about 0.71 million. As you can see in April and May of 2015 there was over a million gallons of unaccountable waste water each day.

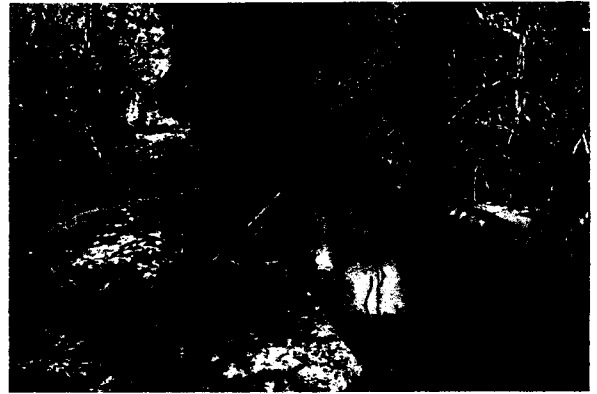


Environmentalists call Spoonbill Marsh 'toxic waste dump'

Posted: Thursday, October 6, 2016 5:00 am

Spoonbill Marsh – which has been cited for infractions by the Florida Department of Environmental Protection in the past – has again become the target of a torrent of stinging accusations, including suggestions that the county is not reporting truthfully to the FDEP.

Since 2010, the \$4 million Spoonbill Marsh project has operated as the disposal site for brine left over after drinking water is purified at the county's reverse osmosis treatment plant. The high-salt concentrate is mixed with lagoon water and filtered through the manmade marsh to purify it. County reports to the FDEP show that pollutant levels are consistently lower in the water flowing from Spoonbill into the lagoon than in the water flowing into the system from the lagoon.



080916_SpoonbillMarsh_DR01.jpg

Example of poor water quality surrounding the mangroves in WIM-02, and flowing into the lagoon.

But a group of mostly nameless opponents of the project are not buying it. An email, written and widely distributed by local resident Barry Shapiro, contains charges that Spoonbill is, basically, “a liquid toxic waste dump,” not built according to its approved design and operating beyond the restrictions of its FDEP permit.

Shapiro claims that marsh water is overflowing onto environmentally sensitive land to the north owned by Indian River Land Trust; that outflow into the lagoon is not being monitored with a proper meter; that the operation is not well maintained; and that it is detrimental to fish and wildlife.

Utilities Department Director Vincent Burke said that, as a result of Shapiro's email blast, a Florida Department of Environmental Protection representative visited the county to take a look at Spoonbill. So far, that visit has not resulted in any sanctions from the state.

Dr. Richard Baker, a longtime local environmentalist, president of Pelican Island Audubon Society and a longtime opponent of the Spoonbill project, echoed Shapiro's concern. “Indian River County was dumping this pollution directly into the lagoon and was told to stop. Now they are still polluting. When will we learn that dilution is not the solution to pollution?”

A recent visit to Spoonbill provided a first-hand look at the marsh operation. On the day Vero Beach 32963 visited the site, water was flowing over the north boundary and onto Land Trust property, and the walkway was submerged.

This is, unquestionably, a malfunction, and according to an expert who wishes to remain anonymous, the overflow has been occurring for “years” and is harming the Land Trust property.

The north boundary of Spoonbill Marsh is Florida Department of Transportation Ditch 3, which runs under U.S. 1 between 63rd and 57th streets and empties into the lagoon. Although Spoonbill's water level, like the

lagoon's, is influenced by the tide – when lagoon water is high, the water in Spoonbill is high – the DOT ditch

is supposed to keep marsh water on county property.

County utility staff member Art Pfeffer, who oversees daily operation of the marsh and conducts FDEP-required tests, blames DOT for the malfunction. He says the Florida Department of Transportation “hasn't maintained the ditch in years.”

Which raises the question – what has the county done about that?

Utilities Director Burke, who wasn't with the county at the beginning of the Spoonbill project, says both the Department of Environmental Protection and the Department of Transportation have been notified about the problem several times.

“The DOT came out in February. They're aware of the issues that exist,” Burke says.

Because the DOT has jurisdictional control, the county isn't willing to take action on its own. “We're waiting to hear from the DOT as far as the next steps. We'll probably ask public works to help keep the conversation going,” since the overflow is, in part, a stormwater issue.

Another major concern among those who view the marsh as an environmental menace is what happens to millions of gallons of effluent they say flows into the marsh daily but doesn't flow out again.

Burke counters that “effluent” typically refers to domestic wastewater discharged from a sewage plant and “would be incorrect to use here.” He says 4 percent to 20 percent daily variance between water brought in and the water that is metered leaving the site is attributed by county consultants “to seepage and evapotranspiration losses.”

The critics are skeptical of this, doubting that evaporation and seepage can account for what they say is as much as 2.5 million gallons of missing water per day.

Another allegation is that the two outflows or breeches, through which mixed water flows back to the lagoon, are not being monitored properly, and that one is virtually inoperable.

Pfeffer admits the north breach is not functioning, and the south breach is handling virtually all the outflow – which seems like it might contribute to the marsh overflow problem. Pfeffer says the DEP is aware of the blockage and it is reflected in the daily reports.

He also acknowledges there is no permanent meter installed to measure water flow, but says that he measures water velocity and volume daily, during the week, using an FDEP-approved hand-held electronic flow probe. He says he transfers his daily on-site notes to detailed FDEP log sheets and his desk is piled with stacks of notes and daily reports forms that he is required to keep.

Burke adds, “As with all our operating permits, the data is collected in accordance with the permit requirements and submitted to the FDEP.”

Responding to questions about Spoonbill's maintenance, Burke says, “We will continue to maintain that site properly, including but not limited to normal routine, access roads, mowing, and maintaining the boardwalk.”

And what of the Land Trust property?

Land Trust Executive Director Ken Grudens says the trust's 50 acres north of Spoonbill is “hydrologically complicated,” with many factors to consider. He said a site study is underway, funded by a grant from U.S.

~~approach, which may allow to construct. He said a site study is underway funded by a grant from the~~
Fish and Wildlife Service and conducted by Knight McGuire & Associates. "We'll have a better sense [of how much Spoonbill Marsh overflow is affecting the property] this fall. We like to work with partners, and we will work with the county to improve our habitat."

The current round of criticism is not the first time the county has faced problems at Spoonbill Marsh.

Shortly after it was constructed, FDEP cited the county for permit infractions, charging that "failure to construct the disposal system at the Spoonbill Marsh site in accordance with the approved design and DEP issued permits had altered the basis for issuance of the permit, resulting in a need to provide a new basis for reasonable assurance of compliance."

In response, the county suggested, and the state approved, four major additions: a debris screen at the intake point; floating plant mats; oyster seed structures; and sea grass zones in the ponds. All four were accomplished. The oysters, Pfeffer notes, are thriving to the point that the county may consider harvesting them.

The Department of Environmental Protection, in response to a list of questions from Vero Beach 32963 has responded via email and telephone that answers are being prepared, but they had not been received by press time.

Total Contributions **\$3,400.00****Campaign Treasurer's Report - In-Kind Contributions**

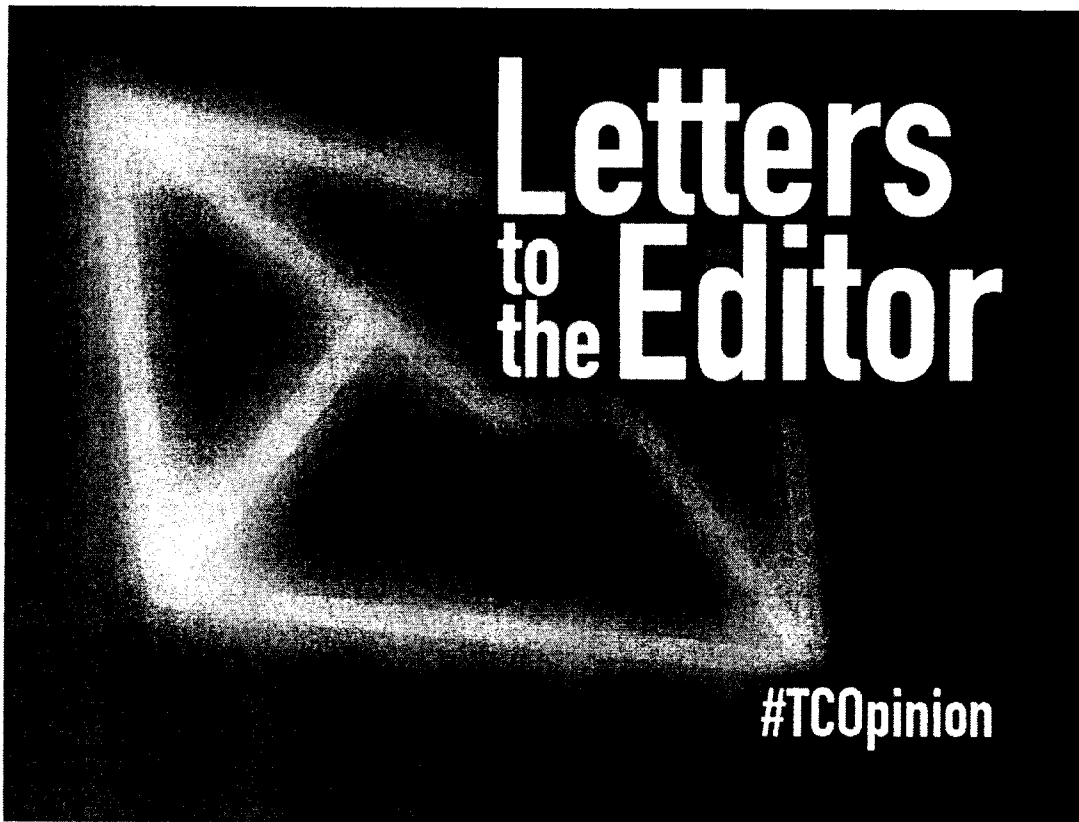
Seq Num	Date	Contributor	Contributor Type	Occupation	In-Kind Description	Amend	Amount
1	6/16/2016	Jay Kramer 5035 Tradewinds dr vero beach, FL 32963		Candidate to Themselves	copies		\$26.22
2	6/8/2016	Linda Ceilley 5728 Riverboat Cir SW Vero Beach, FL 32968	Individual	retired	office supplies		\$10.58
3	6/15/2016	Colostore P.O. Box 5121 Vero Beach, FL 32961	Business	technology	campaign promotional materials		\$99.04
4	6/1/2016	Mr. J's Media Production 929 7 Ave Vero Beach, FL 32960	Business	Marketing	campaign video production		\$1,000.00
5	6/2/2016	Jemal Hayes 831 Montrose Ave. Sebastian, FL 32958	Individual	marketing	campaign video production		\$950.00
6	6/2/2016	Barry Shapiro 1548 Par Ct Vero Beach, FL 32966	Individual	consulting	campaign video production		\$950.00
7	6/5/2016	Barbara Weltman 1708 Lake Club Ct. Vero Beach, FL 32963	Individual		food and drinks for event		\$100.00
8	6/9/2016	Janie Hoover 1410 46 Ave Vero Beach, FL 32966	Individual	marketing	food and drinks for event		\$280.00
9	6/20/2016	Julianne Martensen 1979 Grey Falcon Cir. Vero Beach, FL 32962	Individual		food and drinks for event		\$60.00
Total In-Kind Contributions							\$3,475.84

Campaign Treasurer's Report - Itemized Expenditures

Seq Num	Date	Vendor	Purpose	Expenditure Type	Amend	Amount
1	6/1/2016	Publix 4145 9 str. SW Vero Beach, FL 32968	postage	Monetary		\$47.00
2	6/1/2016	Office Depot 5950 20 Str. Vero Beach, FL 32966	printing	Monetary		\$38.00
3	6/1/2016	Netbrands Media Corp. 14550 Beechnut St. Houston, TX 77003	camp.promotional materials	Monetary		\$120.06
4	6/6/2016	Oriental Trading 4206 S.108 St Omaha, NE 68137	camp.promotional materials	Monetary		\$58.97
5	6/10/2016	Transfirst LLC 12202 Airport Way # 100 Broomfield, CO 80021	online donations fee	Monetary		\$25.17
6	6/13/2016	Signs by Tomorrow 3300 43 rd Ave. # 6	signs	Monetary		\$410.88

LETTERS TO THE EDITOR

Letter: Jay Kramer is smart, proven, effective and right on the important issues



4:00 a.m.

Barry Shapiro, Vero Beach

Letter: Jay Kramer is smart, proven, effective and right on the
important issues

Someone once said that all politics is local and I believe it's true. Our state and county elections are incredibly important, and this is why we must get out the vote in the August primaries.

As a Vero Beach businessman and concerned citizen I am throwing my support behind Republican Jay Kramer for County Commissioner in District 5.

Though I am an independent, this election will have a lasting impact on how government in our county is run and Jay Kramer is smart, proven and effective. I personally know that he's a great guy with a commitment to do the right thing for our community. He's been right on every issue that concerns us. Bob Solari has been terribly wrong on many positions, most importantly how to save the Indian River Lagoon, which is at a critical juncture and affects us all. Solari also has pretty much run the commission his way for years and for me that's reason enough alone for him to be gone.

I worked with Kramer on the creation of the Downtown Vero Beach Art District and the Downtown Business District, and I've seen how he approaches things with a personal touch. I know his commitment to bringing smart growth to the region, to the lagoon and to the children in our county. I know he's a "get-'r-done" kind of guy who finds workable solutions to problems. He's a team player who brings everyone together instead of pushing away people he might disagree with. Those are qualities I want in my local leaders.

The issues are clearly defined: the environment, infrastructure, water quality, taxes, short-term rentals and the elephant in the corner — All Aboard Florida. On these and other points I know Jay Kramer is the right man for the job.

Subject: Fwd: Barry Shapiro mailing
Date: Thursday, September 1, 2016 1:50:13 PM ET
From: Paladin Plan
To: Bob Solari

Begin forwarded message:

From: "David L. Cox" <coxecology@gmail.com>
Date: August 21, 2016 at 9:33:47 PM EDT
To: Joe Paladin <jpsparks76@yahoo.com>, Joe Paladin <paladinplan@yahoo.com>
Subject: Fwd: Barry Shapiro mailing

Joe:

This is what I received from Mr. Shapiro, whom I do not know.

He called me to ask if I would be willing to meet with him to discuss the Spoonbill Marsh. I said yes. Knowing what I now know about what's going on I would now say "NO."

My take on all of this "environmental concern" is that it's all election driven. I am NOT involved in their effort, and have not provided any information, comment, review or analysis. I have had nothing to do with these people.

The path to improving the problems at Spoonbill Marsh does not lead through the arena of campaign politics.

Dr. D

David Cox, Ph.D.
David Cox Consulting, LLC
2044 14th Avenue, Suite 24
Vero Beach, FL 32960
772.564.0540 office
772.766.2074 cell
dlc@davidcoxconsulting.com
www.davidcoxconsulting.com

Begin forwarded message:

From: Barry Shapiro <barry.nohhands@gmail.com>
Subject: cover letter
Date: August 19, 2016 at 9:16:14 PM EDT
To: undisclosed-recipients;;

Attached is a cover letter I plan to send out tomorrow via email or hard copy to the DEP in Washington, the DEP in Tallahassee, a laundry list of local and state politicians, the media, notable environmentalists, notable Vero citizens, and donors to Bob Solari's