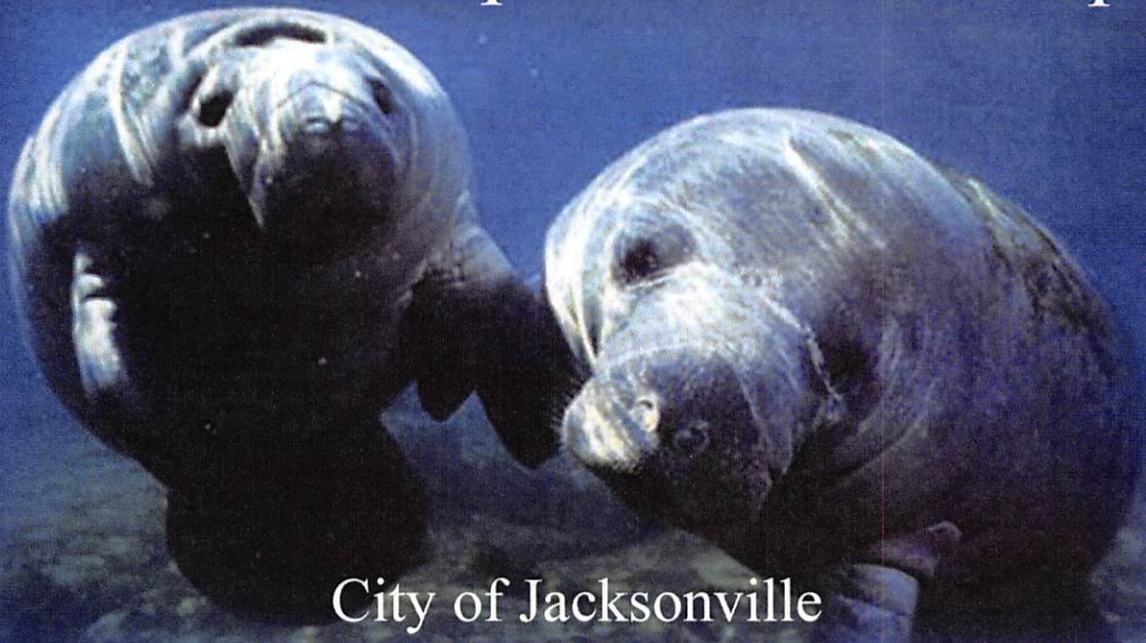


# 2018 Manatee Protection Plan Implementation Report



City of Jacksonville  
Planning and Development Department  
November 2018

## Executive Summary

This is a Summary of the 2018 Manatee Protection Plan Implementation Report that reflects on the City of Jacksonville's efforts towards protecting manatees in Duval County. The third revision to the Duval County Manatee Protection Plan (MPP) was adopted by the Jacksonville City Council in 2014 and requires an annual report of the progress on implementation of the MPP. The MPP is a comprehensive planning document that addresses the long-term protection of the Florida manatee through law enforcement, education, boat facility siting, and habitat protection initiatives on a county-wide basis. The purpose of revising the MPP was to collect and evaluate updated information on manatee use and boat activity in the City of Jacksonville (COJ) and provide guidance targeted at reduction of human-related threats to manatees and manatee habitat. The MPP attempts to balance boater access to Jacksonville waterways with impact to manatees from boat traffic, and is intended to increase the predictability of permitting outcomes for boat facility development.

The 2018 MPP Implementation Report is a compilation of the efforts of a wide variety of agencies that reflect the effort expended to protect manatees in Duval County waters. The report is divided into five (5) sections: Meeting Minutes, Law Enforcement Reports, Education, Awareness and Environmental Reports.

The Meeting Minutes subsection report is an assemblage of the appropriate minutes of the Jacksonville (Duval County) Waterways Committee and the Jacksonville Marine Transportation Exchange (JAXMTX) Harbor Safety Committee. This section serves as a good review of the activities of the year and demonstrates the importance that manatee protection has within the City and JAXPORT.

The Law Enforcement Report subsection includes quarterly reports from Jacksonville Sheriff's Office Law Enforcement Task Force, Florida Fish and Wildlife Commission (FWC) Law Enforcement, and Multi-Agency Deployments. The City has improved communication and coordination between federal and state Law Enforcement agencies since the development of a L.E. Task Force in December of 2009 that has fostered improved efforts in manatee protection. The involvement of the City's Waterways Coordinator, a former JSO marine officer, has been very helpful in a variety of ways. His efforts have resulted in the buy-in of all law enforcement agencies and improved the coordinated multi agency deployment weekends.

The Manatee Education Report contains the extensive effort made on behalf of manatee protection within the City of Jacksonville. Included is the COJ's Park Naturalist Education Program, presentations made by Jacksonville University faculty on manatees, and the FWC Northeast Lab outreach programs. The City also completed a 30 second public service announcement, which will be sent to local television stations for broadcast **again in the beginning of manatee season 2019.**

The Awareness subsection contains the Updated Boat Facility Inventory, a list of DEP Dock permits, Manatee Mortality Information, along with Aerial Sighting Maps. It should be noted that three (3) flights/year are funded by the City of Jacksonville.

In summary, the MPP Implementation Report offers an up to date review of manatee protection efforts in the City of Jacksonville (Duval County).

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## Implementation Summary (Section 8.8 MPP)

| MPP Policies and Tasks   | Action Items   | Progress in 2017-2018  | Tasks for 2018-2019  |
|--|--|--|--|
| The comprehensive plan will be amended to incorporate the revised MPP  | Submit Comprehensive Plan amendment to Department of Economic Development and FWC  | Comprehensive Plan changes approved by City Council. Requested an <b>additional 6 months extension</b> from DEO due to downtown DRI request.       | Resolve downtown DRI marina request then send Comp changes to DEO <b>March 2018.</b> |
| COJ will incorporate the use of the revised MPP in their Planning and Development Department reviews for development | Distribution of revised MPP within COJ once approved   | The Planning and Development Department has created a GIS boat facility layer for use by the zoning, land use and developmental services sections. | Continue to use the GIS layer.   |
| Keep the Jacksonville Waterways Commission up to date on manatee related issues                                      | COJ will attend monthly meetings and provide updates on manatee related issues   | The City's consultant, JU has attended monthly meetings. See Waterways Commission meeting minutes  | JU's 2017-2018 contract has this task identified                                     |
| Report updated information, manatee mortality, and status of implementing the recommendations in the MPP             | Draft and submit an annual MPP Implementation Report   | Submitting 1st required report.  | Continue to collect and summarize data for 2018 report                               |
| COJ will actively engage with the shipping/Port industry   | Representatives of COJ will be members of JMTX and the Port Safety Committee, attend meetings and assist with implementing manatee awareness initiatives | City Waterways Coordinator attends quarterly meetings  | Continue to attend JMTX meetings   |
| COJ will actively engage USCG and Special Events Office  | Representatives of COJ will monitor and track special events in the waterways and assist with implementing manatee awareness initiatives                 | City Waterways Coordinator has worked closely with USCG - they now attend the LE Task Force meetings.  | Have Waterways Coordinator summarize and report on special events in Duval County.   |

| MPP Policies and Tasks  | Action Items   | Progress in 2017-2018   | Tasks for 2018-2019   |
|---|--|---|---|
| COJ will create awareness within the County regarding manatee protection issues | COJ will inspect and replace manatee educational signs that are their responsibility, develop a maintenance plan and a database of locations           | Sign database completed. Working with other agencies for sign and buoy replacement        | Continue to report and work with other agencies for sign and buoy replacement |
| Manatee education Section   | COJ will develop policies or incentives to increase educational signs at private marinas and multi-family docks where signs are not required by permit | New Comp plan policies will help address this issue.                                      | Continue to develop incentives for educational signage                        |
| Manatee education Section   | COJ will work with FWC-ISM, and FWRI to update the Boating and Angling Guide   | Guide is completed and being handed out   | Continue to distribute the guides   |
| Manatee education Section   | COJ will maintain and document manatee sightings reported through the COJ hotline  | The City does not have a hotline. JU does. Info reported by JU                            | Continue to have JU document calls to the hotline                             |
| Manatee education Section   | COJ will produce multimedia information such as PSAs, billboards, social media and on a website to promote information and awareness                   | PSA has been developed  | PSA has been given to Public Information Office to promote manatee awareness  |
| Manatee education Section   | COJ or representatives will present manatee awareness programs to local schools, community groups, boating groups and clubs                            | Information collected from Park Naturalist. Waterways Coordinator also promotes awareness | Continue to provide manatee info through the Parks Department                 |

| MPP Policies and Tasks  | Action Items  | Progress in 2017-2018   | Tasks for 2018-2019  |
|---|---|---|--|
| Law enforcement section   | COJ will coordinate with USCG when special manatee messages are needed in the "Notice to Mariners"  | On-going  | On-going   |
| COJ will facilitate improved law enforcement participation in manatee protection, including improved coordination between multiple agencies | Implementation of the MPP Law Enforcement Plan and the action items within it   | Plan has been implemented. Efforts are being documented                                   | Continue to implement plan   |
| Law enforcement Section   | JSO commits to a minimum of 25 deployments for only manatee speed zone enforcement  | JSO continues deployments to manatee speed zone enforcement                               | Continue to collect quarterly reports from JSO                       |
| Law enforcement section   | A minimum of six coordinated, multi-agency weekend deployments from April to October specifically for manatee speed zone enforcement  | Completed in 2015. Efforts reported in yearly implementation report                       | Six deployments have been scheduled for this year.                   |
| COJ will keep the MPP current, with the best available data and wildlife protection practices   | Review the MPP periodically in conjunction with FWC and USFWS to determine whether revisions are needed; Requires COJ analysis and compilation of information from the annual reports | Continue to update manatee data through JU contract. Submit yearly implementation reports | Continue to update manatee data through JU contract.                 |
| Implementation section  | Complete a Manatee Speed Zone Compliance Study  | The City is now revising this study protocol suggestions provided by FWC                  | Work to complete study protocol in 2018-2019. Find funding next year |
| Implementation section  | Develop a Boat Activity Study Protocol between Recreational and Shipping traffic, and complete the Study  | The City will send to FWC for approval  | Work to complete study when funded.                                  |

| MPP Policies and Tasks | Action Items   | Progress in 2017-2018         | Tasks for 2018-2019           |
|------------------------|--|-------------------------------|-------------------------------|
| Implementation section | Marine Facility Inventory Update   | Completed through JU contract | In JU contract for this year. |
| Implementation section | Maintain an up-to-date record of the location and status of foraging habitat, warm water discharges and freshwater sources | On-going                      | On-going                      |

# Manatee Data Report

***Aerial Sightings:*** A synoptic survey of northeast Florida was conducted on February 8<sup>th</sup> 2018 with no animals sighted in the St. Johns River (no flight was possible in the ICW due to poor weather conditions). Subsequent surveys in 2018 occurred in May, and August (3 total). Past synoptic surveys identified few animals in the area: On February 1<sup>st</sup> 2017 a synoptic survey reported 6 animals sighted in the area (3 total). Other surveys in 2017 occurred in May, and September. In 2016, a synoptic survey on February 12<sup>th</sup> reported no manatee sightings. Other surveys in 2016 took place in March, April, May, June, August and September (7 total). Similarly in 2015, a synoptic survey on February 16<sup>th</sup> reported no manatees sighted in the area. Subsequent surveys in 2015 occurred in April, June, August, October and November (6 total).

The Single Highest Day Count (SHDC) of manatees represents the highest number of animals counted on a single survey day throughout the year. For the Lower St. Johns River (LSJR), the SHDC for 2018 was unusually low with 23 animals per survey (May) – which was lower than previous ever reported. This was partly due to animals arriving late into the area, but also not staying, because of a lack of food resources. Severe drought in early 2017 followed by storms and hurricanes later in the year negatively impacted the grass beds, likely causing manatees to travel more for food outside the study area. In contrast, the SHDC for 2017 was 90 animals per survey (May) – which was also lower than 2016 and again probably due to a severe drought earlier in the year. In 2016, the SHDC was 217 animals per survey (May) – the highest count on recorded. In 2015 the SHDC was 155 animals per survey this time in June, and in 2014 it was 176 (June); 2013 it was 143 (July), and in 2012 it was 177 (May).

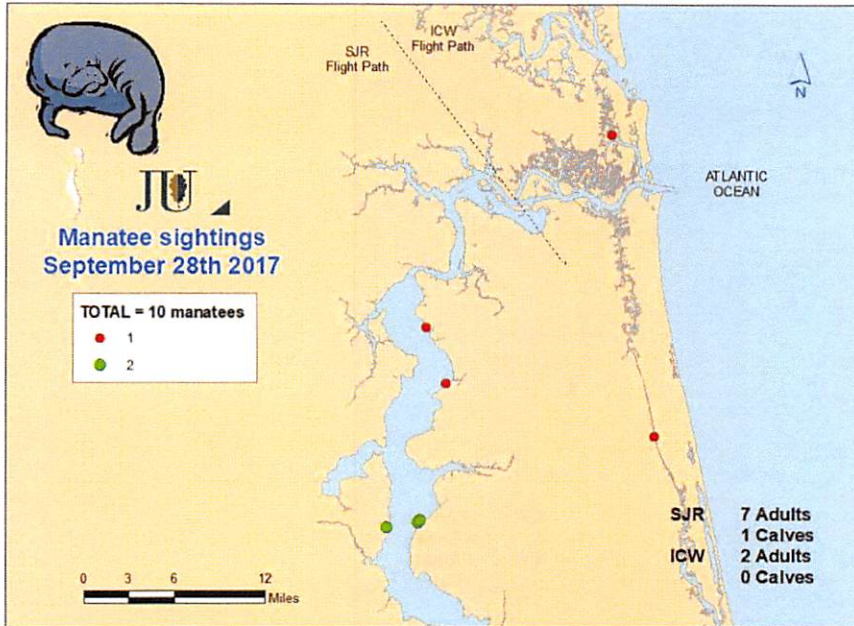
In 2018, the mean number of manatees in Duval County was 11 manatee per survey until August (3 surveys). This was unusually low. However, in 2017 the mean number of manatees was 33 manatee per survey (3 surveys), also lower than in previous years. Compared to 2016, the mean number of manatees 102 (8 surveys) and in 2015 averaged 57 (six surveys). It is important to note that beginning in 2012 there was a shift in the emphasis of data collection towards assisting the law enforcement effort to protect manatees and educate boaters. As a result, sampling frequency was significantly reduced and now focuses only on those months when manatee presence in the area is considered to be at its highest (5 surveys/year; s.d.  $\pm$  2; range 3-8). To more accurately reflect the shift in sampling frequency and focus, manatee data in this report was separated into these two time periods (1994-2012 and 2013-2017).

In the Intracoastal Waterway (ICW) the mean number of manatees was lower than usual with 2 manatee per survey in both 2017 and 2018. Slightly more manatees were observed in the past with 9 manatees per survey (May 2016), 5 manatees per survey (June 2015 and May 2014), 9 (April and July 2013). The time period from 2013-2017 has a survey frequency (4 surveys/year; s.d.  $\pm$ 2; range 2-6) and returned a general mean of 5 manatee per survey (range 2-9 animals).

Seasons were generally classified as follows with each map indicating the specific date when a particular aerial survey was conducted: Winter - December – February; spring – March – May; summer - June – August; fall - September – November.



**MAP SERIES A – Manatee aerial sightings, Duval Co., FL. (fall, 2017)**

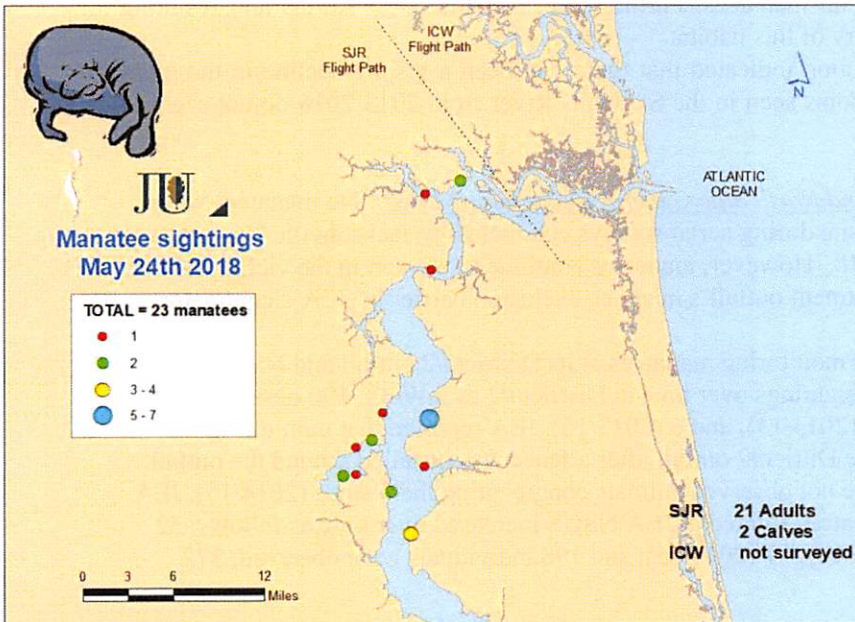


The information contained in this email and the manatee sighting maps are the results of aerial surveys conducted by Jacksonville University under an agreement with COJ. The manatee sightings represent the known minimum number of animals and their location at the time of the flight. The numbers may be higher and the animals change locations frequently. The information is an indication of the number and the location of manatees and subject to change daily.

**MAP SERIES A – Manatee aerial sightings, Duval Co., FL. (winter, 2017-2017)**

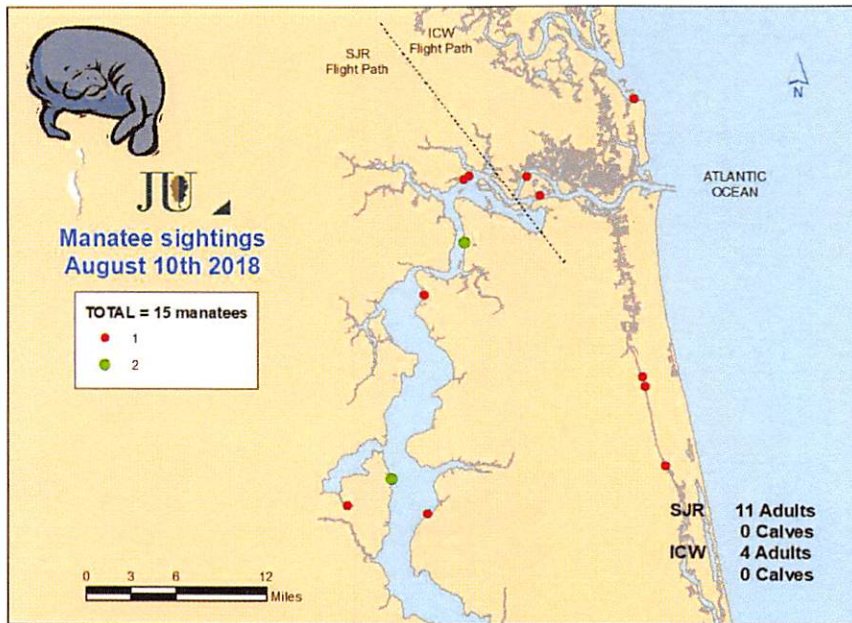
On February 8<sup>th</sup> 2018, but no animals were observed during the Northeast Synoptic Survey.

**MAP SERIES A – Manatee aerial sightings, Duval Co., FL. (spring, 2018)**



The information contained in this email and the manatee sighting maps are the results of aerial surveys conducted by Jacksonville University under an agreement with COJ. The manatee sightings represent the known minimum number of animals and their location at the time of the flight. The numbers may be higher and the animals change locations frequently. The information is an indication of the number and the location of manatees and subject to change daily.

MAP SERIES A – Manatee aerial sightings, Duval Co., FL. (fall, 2018)



The information contained in this email and the manatee sighting maps are the results of aerial surveys conducted by Jacksonville University under an agreement with COJ. The manatee sightings represent the known minimum number of animals and their location at the time of the flight. The numbers may be higher and the animals change locations frequently. The information is an indication of the number and the location of manatees and subject to change daily.

**Habitat:** Line transect data from 2004-2011, and 2015-2017 indicated that there was a significant long term decline in the grass bed total cover percentage at sites sampled in Duval County (SJRWMD 2018). There has been a limited recovery of grass beds which still remain below historic levels of the late 1990's. Additional observations made during aerial surveys in 2015 and 2016 indicated that SAV returned to some areas previously reported to be devoid of grasses. Manatee were observed feeding in those areas. However, recent observations indicate that there are many bare areas with no manatees. Furthermore, that the latest storms and resulting turbidity has hindered the recovery of this habitat.

In the past, aerial observation indicated that there had been a visible decline in the grass beds since 2005. Toxic algae blooms seen in the St. Johns River from 2013-2016 do not seem to have harmed any manatees.

**JEA District # 2 Outfall and North Side Generating Station (NSGS):** No manatees were observed at the JEA District # 2 site during aerial surveys conducted by Jacksonville University from spring to fall of 2013 to 2018. However, manatees continue to be seen in the vicinity of the JEA District # 2 waste water treatment outfall's manatee exclusion barrier by JEA's contractor and others.

Since 2011, JEA has been monitoring manatees at its District #2 outfall and NSGS from October to March. JEA reported sightings over time at District #2 as follows: 190 observations (2011/12); 49 (2012/13); and 46 (2013/14); and 6 (2015/16). JEA reported that monitoring stopped for a period of time at the District#2 outfall after a fence was installed around the outfall. Limited aerial surveys by JU have not observed animals congregating there since (2014/15). JEA reported that the numbers of manatees sighted at JEA NSGS increased over time as follows: 52 observations (2012/13); 60 (2013/14); 87 (2014/15); and 198 individuals were observed, 372 times in (2015/16).

The lower frequency of aerial survey effort, especially during cold weather, was insufficient to document manatees at this site during the years 2009-2018. However, boat and land surveys by independent contractors indicated that manatees consistently make use of the site.

**NAS Mayport:** Mayport NAS initiated manatee awareness and reporting program in spring 2011. Signs were posted at intervals along Mayport basin, and a data log kept of sightings and actions. **As of September 2018, 42 animals were sighted (range 0-19/month).** In 2017, 59 animals were sighted (range 0-18/month). In 2016, 152 animals were sighted (range 0-48/month), and in 2015, 130 animals (range 0-44/month). Lower numbers were observed during 2013/14 with a mean of 65 (range 0-16), and during 2011/12 with a mean of 35 animals (0-13/month).

**Duval Manatee Rescues:** **On March 22<sup>nd</sup> 2018, a male manatee was rescued from Miller Creek, it was stuck in the mud and cold stressed.** In 2017, on February 7<sup>th</sup> 2017, a male manatee was rescued from Ortega River. On March 31<sup>st</sup> a female manatee was rescued from Pablo Creek, both manatees exhibited symptoms of cold stress. Furthermore, three manatees were assisted and released on 1<sup>st</sup> June (Pablo Creek), 2<sup>nd</sup> July (intake canal JEA NSGS), and a calf on September 11<sup>th</sup> near Wayland Street opposite Talleyrand docks. **On December 16<sup>th</sup> a female calf was rescued in the San Pablo River, she was beached by herself and cold stressed.** In 2016, two manatee rescues were performed at JEA's NSGS. "Stokes" was rescued on Jan 27<sup>th</sup>, and another animal on March 7<sup>th</sup>, both animals were taken to Sea World of Florida due to cold stress related issues. On November 30<sup>th</sup> a female manatee was rescued from a storm drain near Davinci Ave. also transported to Sea World. There were no reported assists or rescues as of September 2015. In 2014, six manatee rescues occurred during cold weather from (JEA District #2 outfall, Green Field Creek, Mill Cove, San Carlos Creek, and Cut Creek).

## MANATEE MORTALITY

### Mortality Calendars

**2013**

|                   | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | TOTALS |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| Natural deaths    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0      |
| watercraft deaths | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 2   | 0   | 0   | 0   | 4      |
| prenatal          | 0   | 0   | 0   | 0   | 2   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 3      |
| other human       | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0      |
| cold stress       | 3   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 7      |
| undetermined      | 1   | 1   | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 4      |
| total deaths      | 4   | 2   | 2   | 0   | 2   | 4   | 0   | 0   | 2   | 0   | 0   | 2   | 18     |

**2014**

|                   | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | TOTALS |
|-------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|--------|
| Natural deaths    | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| watercraft deaths | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| prenatal          | 0   | 0   | 0   | 0   | 0   | 1    | 0    | 0   | 0    | 0   | 2   | 0   | 3      |
| other human       | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| cold stress       | 1   | 1   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 3   | 5      |
| undetermined      | 0   | 0   | 1   | 1   | 0   | 0    | 2    | 0   | 0    | 0   | 0   | 0   | 4      |
| total deaths      | 1   | 1   | 1   | 1   | 0   | 1    | 2    | 0   | 0    | 0   | 0   | 0   | 12     |

**2015**

|                   | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | TOTALS |
|-------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|--------|
| Natural deaths    | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| watercraft deaths | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 1    | 0   | 0   | 0   | 1      |
| prenatal          | 0   | 0   | 0   | 1   | 1   | 0    | 0    | 1   | 0    | 0   | 0   | 0   | 3      |
| other human       | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| cold stress       | 2   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 2      |
| undetermined      | 0   | 0   | 0   | 0   | 0   | 1    | 1    | 0   | 0    | 0   | 0   | 0   | 2      |
| total deaths      | 2   | 0   | 0   | 1   | 1   | 1    | 1    | 1   | 1    | 0   | 0   | 0   | 8      |

**2016**

|                   | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | TOTALS |
|-------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|--------|
| Natural deaths    | 0   | 0   | 0   | 0   | 0   | 0    | 1    | 1   | 0    | 0   | 0   | 0   | 2      |
| watercraft deaths | 1   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 1      |
| prenatal          | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| other human       | 0   | 0   | 0   | 0   | 0   | 0    | 1    | 0   | 0    | 0   | 0   | 0   | 1      |
| cold stress       | 1   | 1   | 1   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 3      |
| undetermined      | 0   | 0   | 2   | 0   | 0   | 2    | 1    | 0   | 0    | 0   | 0   | 0   | 5      |
| total deaths      | 2   | 1   | 3   | 0   | 0   | 2    | 3    | 1   | 0    | 0   | 0   | 0   | 12     |

**2017**

|                   | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | TOTALS |
|-------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|--------|
| Natural deaths    | 0   | 0   | 0   | 0   | 1   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 1      |
| watercraft deaths | 0   | 1   | 0   | 0   | 0   | 2    | 1    | 1   | 0    | 0   | 0   | 0   | 5      |
| prenatal          | 0   | 0   | 0   | 0   | 1   | 1    | 1    | 1   | 1    | 0   | 0   | 0   | 5      |
| other human       | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 0   | 0      |
| cold stress       | 1   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    | 0   | 0   | 2   | 3      |
| undetermined      | 0   | 0   | 0   | 0   | 2   | 1    | 1    | 0   | 0    | 1   | 0   | 0   | 5      |
| total deaths      | 1   | 1   | 0   | 0   | 4   | 4    | 3    | 2   | 1    | 1   | 0   | 2   | 19     |

FWC, FWRI 2017.

## Mortality Calendars cont.

2018

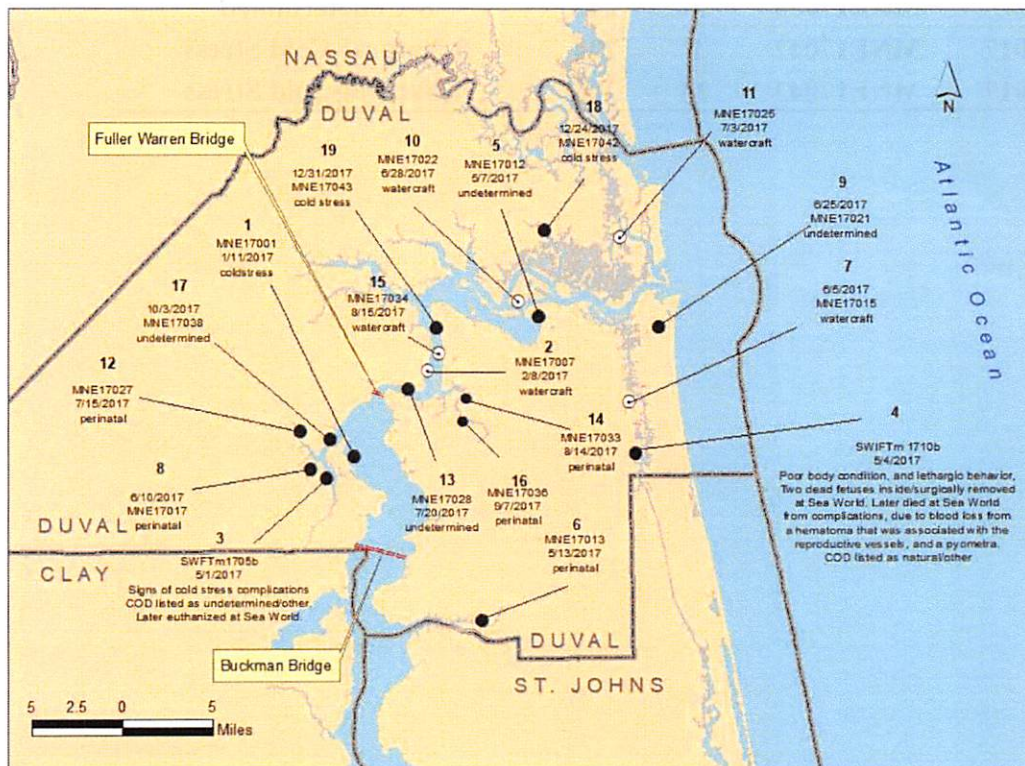
|                   | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | TOTALS |
|-------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|--------|
| Natural deaths    | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    |     |     |     | 0      |
| watercraft deaths | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 0    |     |     |     | 0      |
| prenatal          | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 1    |     |     |     | 1      |
| other human       | 0   | 0   | 0   | 0   | 0   | 0    | 0    | 0   | 1    |     |     |     | 1      |
| cold stress       | 2   | 1   | 0   | 0   | 0   | 0    | 0    | 0   | 0    |     |     |     | 3      |
| undetermined      |     | 1   | 0   | 1   | 1   | 0    | 0    | 0   | 0    |     |     |     | 3      |
| total deaths      | 2   | 2   | 0   | 1   | 1   | 0    | 0    | 0   | 2    |     |     |     | 8      |

FWC, FWRI 2018 preliminary data.

## Manatee Mortality

**Manatee Mortality:** The five year running average of water craft mortalities decreased since 2012 (6), 2013 (5), 2014 (3), 2015 (3), 2016 (2), 2017 (2), and as of September 2018 (0) (FWRI 2018). Furthermore, no large vessel caused deaths were reported from 2013 to 2018. From 2009 to 2013, more watercraft deaths were documented towards the mouth of the river, rather than a more county wide spread as in prior years. Manatee deaths seem to have occurred in an area extending from Downtown to the mouth of the St. Johns River. Recently in the last two years there have been a few more deaths south of downtown, particularly in the Ortega River area. In 2018, the number of deaths was over all lower, but this may have been due to unusually less manatees in the area (Map Series B).

### SERIES B – Manatee mortality, Duval Co., FL. 2017



Dots surrounded with a white border are watercraft mortalities. FWRI 2018.

**Manatee deaths from all causes 2017, Duval Co., FL.**

| <b>Count</b> | <b>Date</b> | <b>Manatee field ID</b> | <b>Sex</b> | <b>Total Length</b> | <b>Mortality category</b> |
|--------------|-------------|-------------------------|------------|---------------------|---------------------------|
| 1            | 1/11/2017   | MNE17001                | F          | 173                 | 5-Natural-Cold Stress     |
| 2            | 2/8/2017    | MNE17007                | M          | 212                 | 1-Watercraft              |
| 3            | 5/1/2017    | SWFTm1705b              | M          | 285                 | 8-Undetermined, Other     |
| 4            | 5/4/2017    | SWFTm1710b              | F          | 264                 | 6-Natural, Other          |
| 5            | 5/7/2017    | MNE17012                | M          | 290                 | 8-Undetermined            |
| 6            | 5/13/2017   | MNE17013                | M          | 139                 | Perinatal ( =< 150 )      |
| 7            | 6/5/2017    | MNE17015                | M          | 308                 | 1-Watercraft              |
| 8            | 6/10/2017   | MNE17017                | F          | 124                 | Perinatal ( =< 150 )      |
| 9            | 6/25/2017   | MNE17021                | M          | 220                 | 8-Undetermined            |
| 10           | 6/28/2017   | MNE17022                | M          | 288                 | 1-Watercraft              |
| 11           | 7/3/2017    | MNE17025                | M          | 291                 | 1-Watercraft              |
| 12           | 7/15/2017   | MNE17027                | F          | 138                 | Perinatal ( =< 150 )      |
| 13           | 7/20/2017   | MNE17028                | F          | 225                 | 8-Undetermined            |
| 14           | 8/14/2017   | MNE17033                | F          | 110                 | Perinatal ( =< 150 )      |
| 15           | 8/15/2017   | MNE17034                | M          | 274                 | 1-Watercraft              |
| 16           | 9/7/2017    | MNE17036                | F          | 123                 | Perinatal ( =< 150 )      |
| 17           | 10/3/2017   | MNE17038                | M          | 242                 | 8-Undetermined            |
| 18           | 12/24/2017  | MNE17042                | F          | 294                 | 5-Natural-Cold Stress     |
| 19           | 12/31/2017  | MNE17043                | M          | 300                 | 5-Natural-Cold Stress     |

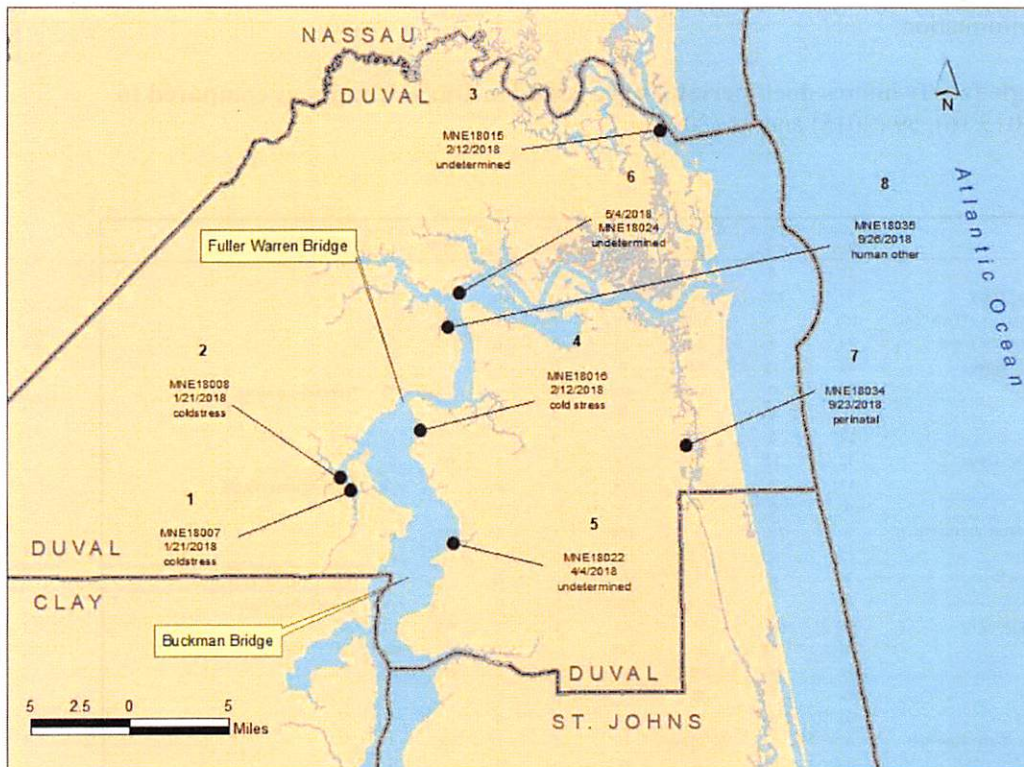
FWC, FWRI 2018.

**Manatee deaths from all causes 2018, Duval Co., FL.**

| Count | Date      | Manatee field ID | Sex | Total Length | Mortality category       |
|-------|-----------|------------------|-----|--------------|--------------------------|
| 1     | 1/21/2018 | MNE18007         | M   | 290          | 5-Natural-Cold Stress    |
| 2     | 1/21/2018 | MNE18008         | F   | 275          | 5-Natural-Cold Stress    |
| 3     | 2/12/2018 | MNE18015         | M   | 231          | 8-Undetermined           |
| 4     | 2/12/2018 | MNE18016         | F   | 247          | 5-Natural-Cold Stress    |
| 5     | 4/4/2018  | MNE18022         | F   | 147          | 8-Undetermined           |
| 6     | 5/4/2018  | MNE18024         | F   | 262          | 8-Undetermined           |
| 7     | 9/23/2018 | MNE18034         | M   | 134          | Perinatal (= $\leq$ 150) |
| 8     | 9/26/2018 | MNE18035         | M   | 316          | 3-Human, Other           |

FWC, FWRI 2018.

**SERIES B – Manatee mortality, Duval Co., FL. until September 2018.**



FWRI 2018.

## Marine Facility Inventory Summary

### Boat Launch Facilities Signage Inventory:

An inventory of signage was completed and there were no changes to report since the previous year. A couple of vandalized signs were attended to including a manatee kiosk sign at Oak Harbor boat ramp that was cleaned, and a manatee informational sign at Goodby's Creek boat ramp that was removed and has not been replaced yet. The database of all local manatee, boating safety signage, and information kiosks at boat ramps in Duval County is current and up to date. Methods: Researchers visited all facilities to record and verify information.

### Marine Facilities Inventory:

This inventory includes **187** commercial and multi-family marinas and docks, which were checked over the boating season (June-September). Changes in the number of wet and dry slips from the previous year are highlighted. There was a reduction in the number of wet slips from 4,186 in 2014 to 4,125 in 2015 (change -61); **the number of wet slips decreased in 2016/17 to 3,882 (change -243)**. Dry slips decreased from 2,562 in 2014 to 2,510 in 2015 (change -52), **with a single slip decrease in 2016/17 (2,509)**. There was a total of 69 ramps and 782 parking spaces in 2015. Notes were made about slips that exist only as developments rights, and some reductions are where marinas closed or self-reported a reduction of slips.

Methods: Researchers placed phone calls to individual facilities to obtain information about the occupancy and capacity changes if any. Subsequent to that, researchers visited a subsample of these facilities to verify information.

**In addition, 82 single family homes dock permits were issued in Duval County as compared to 64 (2016/17), 65 (2015/16), 59 (2015) and 71 (2014).**

| No. | Type | Facility name                           | Wet slips<br>2015 | Dry slips<br>2015 | Wet Slips<br>2016 | Dry Slips<br>2016 | No. of<br>Ramps | No. of<br>Lanes | Paved | Parking<br>Spaces | Additional Notes                  |
|-----|------|---|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------------------|-----------------------------------|
| 1   | M    | Clark's Fish Camp                       | 10                | 0                 | 15                | 0                 | 0               | 0               |       | 0                 |                                   |
| 2   | M    | The Marina at Julington Creek           | 91                | 226               | 99                | 226               | 0               | 0               |       | 55                |                                   |
| 3   | M    | Mandarin Holiday Marina and Fish Camp   | 160               | 0                 | 160               | 0                 | 1               | 1               | YES   | 20                |                                   |
| 4   | M    | Beatrice A. Gamble Julington Pier 3     | 84                | 8                 | 84                | 25                | 0               | 0               |       | 40                |                                   |
| 5   | M    | Bull Bay Pier/ Wiley E. Andreu          | 84                | 15                | 84                | 0                 | 0               | 0               |       | 30                |                                   |
| 6   | MF   | Old Bull Bay*                           | 6                 | 0                 | n/a               | n/a               | 0               | 0               |       | n/a               | *contact unavailable              |
| 7   | MF   | Tala Cay HOA                            | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                                   |
| 8   | MF   | Plummers Cove HOA                       | 12                | 0                 | 14                | 0                 | 0               | 0               |       | 0                 |                                   |
| 9   | M    | Florida's Tackle and Gun Club           | 32                | 12                | 23                | 16                | 1               | 1               | YES   | 0                 |                                   |
| 10  | MF   | The Cove at St. John's*                 | 13                | 0                 | n/a               | n/a               | 0               | 0               |       | n/a               | *contact unavailable              |
| 11  | MF   | La Terraza                              | 4                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                                   |
| 12  | M/C  | NFL Yacht Sales/ Mandarin Marina/ GCYC  | 5                 | 208               | 5                 | 208               | 1               | 1               | YES   | 10                |                                   |
| 13  | M    | Epping Forest Yacht Club                | 73                | 0                 | 73                | 0                 | 0               | 0               |       | 0                 |                                   |
| 14  | OT   | 6006 of Jacksonville Inc*               | 7                 | 0                 | 7                 | 0                 | 0               | 0               |       | 0                 | *empty lot with boat lift         |
| 15  | MF   | Club Condominiums                       | 8                 | 0                 | n/a               | n/a               | 0               | 0               |       | n/a               | contact unavailable               |
| 16  | M    | The Rudder Club of Jacksonville         | 35                | 65                | 35                | 65                | 1               | 1               | YES   | 30                |                                   |
| 17  | M    | NAS/ Jax Marina                         | 152               | 248               | 95                | 248               | 1               | 1               | YES   | 40                |                                   |
| 18  | M    | Florida Yacht Club                      | 93                | 50                | 80                | 35                | 1               | 1               | YES   | 30                |                                   |
| 19  | MF   | Venitian on the Ortega                  | 43                | 0                 | 43                | 0                 | 0               | 0               |       | 0                 |                                   |
| 20  | MF   | Confederate Point Apts                  | 10                | 0                 | 10                | 0                 | 0               | 0               |       | 0                 |                                   |
| 21  | MF   | Preserve at Cedar River/Cedar Cove Apts | 4                 | 0                 | 10                | 0                 | 1               | 1               | YES   | 0                 |                                   |
| 22  | OT   | 2509 Blanding Blvd LLC                  | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |                                   |
| 23  | MF   | Coastal Creek Condo fka Cedar Shores    | 24                | 0                 | 24                | 0                 | 0               | 0               |       | 0                 |                                   |
| 24  | M    | Lighthouse Marine/ Florcal Marina       | 23                | 16                | 20                | 20                | 0               | 0               |       | 20                | * previously Cedar River Moorings |
| 25  | M    | Cedar Creek Landing Condos              | 15                | 0                 | 7                 | 20                | 1               | 1               | YES   | 0                 |                                   |
| 26  | MF   | Canterbury Gardens (Londontowne) Apts   | 0                 | 0                 | 0                 | 0                 | 0               | 0               |       | 0                 |                                   |

C = Commercial; M = Marina; MF = Multifamily; OT = Other; R=Ramp; SBT=Ship/Barge/Tug; T=Transitory



| No. | Type | Facility name                          | Wet slips<br>2015 | Dry slips<br>2015 | Wet Slips<br>2016 | Dry Slips<br>2016 | No. of<br>Ramps | No. of<br>Lanes | Paved | Parking<br>Spaces | Additional Notes                        |
|-----|------|--|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------------------|---|
| 27  | MF   | Chuck's Boat Yard (Kiehm Estate)*      | 30                | 0                 | n/a               | n/a               | 0               | 0               |       | n/a               | *owner deceased, property unoccupied    |
| 28  | OT   | Lakeshore Dry Storage                  | 0                 | 200               | 0                 | 200               | 0               | 0               |       | 0                 |   |
| 29  | M    | Lambs Yacht Center                     | 250               | 0                 | 248               | 0                 | 0               | 0               |       | 0                 |   |
| 30  | M    | Cedar Point Marina                     | 23                | 0                 | 70                | 0                 | 0               | 0               |       | 0                 |   |
| 31  | M    | Huckins Yacht Club                     | 38                | 0                 | 38                | 0                 | 0               | 0               |       | 0                 |   |
| 32  | M    | Sadler Point Marina                    | 66                | 30                | 66                | 30                | 0               | 0               |       | 35                |   |
| 33  | M    | Ortega Yacht Club Marina               | 99                | 0                 | 99                | 0                 | 0               | 0               |       | 0                 |   |
| 34  | M    | Lakeside Ortega Prtnshp/ Jowens Marina | 24                | 0                 | 24                | 0                 | 0               | 0               |       | 0                 |   |
| 35  | M    | Ortega Landing Marina                  | 192               | 0                 | 192               | 0                 | 0               | 0               |       | 0                 |   |
| 36  | MF   | Commander Apt                          | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |   |
| 37  | OT   | Jerry Stozler Ferguson Estate          | 12                | 0                 | 12                | 0                 | 0               | 0               |       | 0                 |   |
| 38  | M    | River City Brewing Co                  | 60                | 0                 | 58                | 0                 | 0               | 0               |       | 0                 |   |
| 39  | M    | Berkman Plaza and Marina               | 54                | 0                 | 54                | 0                 | 0               | 0               |       | 0                 |   |
| 40  | M    | Shipyards*                             | 240               | 0                 | 240               | 0                 | 0               | 0               |       | 0                 | *Development rights/ not constructed    |
| 41  | M    | Metropolitan Park and Marina           | 78                | 0                 | 78                | 0                 | 0               | 0               |       | 0                 |   |
| 42  | MF   | Colonial Point Condos                  | 14                | 0                 | 14                | 0                 | 0               | 0               |       | 0                 |   |
| 43  | MF   | Carlton at Oak Landing                 | 0                 | 0                 | 0                 | 0                 | 0               | 0               |       | 0                 |   |
| 44  | MF   | Magnolia Shores Homeowners             | 7                 | 0                 | 7                 | 0                 | 0               | 0               |       | 0                 |   |
| 45  | MF   | River Hills Condo                      | 21                | 0                 | 21                | 0                 | 0               | 0               |       | 0                 |   |
| 46  | OT   | Jones College                          | 7                 | 0                 | 7                 | 0                 | 0               | 0               |       | 0                 |   |
| 47  | M    | Arlington Marina/ MoBro Marine inc     | 30                | 135               | 30                | 135               | 0               | 0               |       | 0                 |   |
| 48  | MF   | St Johns Riverview Homes Condo Assoc   | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |   |
| 49  | MF   | Arlington by the River Condo           | 17                | 0                 | 17                | 0                 | 0               | 0               |       | 0                 |   |
| 50  | OT   | JU Row Cnt and Marine Sci Docl         | 8                 | 0                 | 8                 | 0                 | 2               | 2               |       | 0                 |   |
| 51  | M    | Pirates Point Yacht Club & Marina      | 14                | 0                 | 14                | 0                 | 0               | 0               |       | 0                 |   |
| 52  | M    | William Dye Marina (DyemicYachts)      | 44                | 6                 | 44                | 6                 | 0               | 0               |       | 0                 |   |
| 53  | OT   | Fire Station #38 (COJ)                 | 12                | 0                 | 12                | 0                 | 0               | 0               |       | 0                 |   |
| 54  | M    | Seafarers Marina                       | 75                | 0                 | 75                | 0                 | 0               | 0               |       | 0                 |   |
| 55  | M    | Edwards Marina (Fisherman's Marina)    | 23                | 0                 | 23                | 0                 | 0               | 0               |       | 0                 |   |
| 56  | MF   | Eleanor Garrison                       | 8                 | 0                 | 8                 | 0                 | 0               | 0               |       | 0                 |   |
| 57  | MF   | Loretta Courson                        | 5                 | 0                 | 5                 | 0                 | 1               | 1               | YES   | 0                 |   |
| 58  | MF   | Trout River Drive Apts (Strong)        | 0                 | 7                 | 0                 | 7                 | 1               | 1               | YES   | 0                 |   |
| 59  | MF   | Sibbald Road Trust                     | 5                 | 0                 | 5                 | 0                 | 0               | 0               |       | 0                 |   |
| 60  | M    | Dames Pt Marina (Shafnacker)           | 23                | 20                | 25                | 0                 | 1               | 2               | NO    | 0                 |   |
| 61  | M    | Dames Pt Yacht Club (Nicholas Crk Dev) | 6                 | 0                 | 6*                | n/a               | 0               | 0               |       | 0                 | * tug and barg slips, unable to confirm |
| 62  | OT   | Safe Harbor Haven (Boys Home)          | 59                | 36                | 59                | 36                | 1               | 0               |       | 0                 |   |
| 63  | M    | Brown's Creek Fish Camp                | 0                 | 25                | 0                 | 25                | 1               | 1               | YES   | 0                 |   |
| 64  | M    | Clapboard Creek Marina                 | 30                | 20                | 30                | 20                | 0               | 0               |       | 0                 |   |
| 65  | M    | Clapboard Creek Fish Camp              | 0                 | 30                | 0                 | 33                | 1               | 1               | YES   | 0                 |   |
| 66  | M    | Mariner Point Yacht Club               | 50                | 0                 | 50                | 0                 | 0               | 0               |       | 0                 |   |
| 67  | MF   | Harbour North Park Assoc               | 6                 | 0                 | 6                 | 0                 | 1               | 1               | YES   | 0                 |   |
| 68  | OT   | Riverfront RV Park                     | 6                 | 0                 | 6                 | 0                 | 1               | 1               | ?     | 0                 |   |
| 69  | M    | Sandollar Marina*                      | 12                | 0                 | 12                | 0                 | 0               | 0               |       | 0                 | * marina is closed                      |
| 70  | M    | Fort George Harbor Yacht Club          | 10                | 128               | 10                | 135               | 0               | 0               |       | 0                 |   |
| 71  | OT   | Mayport Harbor OPS                     | 16                | 0                 | 16                | 0                 | 1               | 1               | YES   | 0                 |   |
| 72  | OT   | JPA/ St John's Bar Pilot Assoc         | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |   |
| 73  | M    | Morningstar Marinas                    | 10                | 200               | 10                | 200               | 0               | 0               |       | 0                 |   |
| 74  | OT   | JPA/ Mayport Tavern                    | 7                 | 0                 | 7                 | 0                 | 0               | 0               |       | 0                 |   |
| 75  | OT   | JPA/ Mayport Yacht Basin               | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |   |
| 76  | MF   | Spanish Point Civic Assoc              | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 0                 |   |
| 77  | M    | Queens Harbour Yacht and Country Club  | 60                | 0                 | 46                | 0                 | 0               | 0               |       | 0                 |   |
| 78  | MF   | Harbortown fka Pablo Creek Marina      | 150               | 0                 | 150               | 0                 | 0               | 0               |       | 0                 |   |
| 79  | MF   | Seven Pines Island Marina Assoc        | 20                | 0                 | 20                | 0                 | 0               | 0               |       | 0                 |   |
| 80  | MF   | Sunset Point Homeowners Assoc          | 5                 | 0                 | 5                 | 0                 | 0               | 0               |       | 0                 |   |
| 81  | M    | Palm Cove Marina                       | 375               | 438               | 221               | 432               | 1               | 1               | YES   | 0                 |   |
| 82  | M    | Beach Marine                           | 350               | 350               | 350               | 350               | 0               | 0               |       | 0                 |   |
| 83  | M    | Moorings Condo Assoc                   | 81                | 0                 | 81                | 0                 | 0               | 0               |       | 0                 |   |
| 84  | MF   | Waterside fka Lighthouse Grille/ Cove  | 24                | 0                 | 24                | 0                 | 0               | 0               |       | 0                 |   |
| 85  | M    | Marina San Pablo                       | 46                | 0                 | 46                | 0                 | 0               | 0               |       | 0                 |   |
| 86  | R    | Hood Landing Boat Ramp                 | 0                 | 0                 | 0                 | 0                 | 1               | 1               | Yes   | 12                |   |
| 87  | R    | Madarin Park Boat Ramp                 | 0                 | 0                 | 0                 | 0                 | 1               | 2               | YES   | 15                |   |
| 88  | R    | Duval County Dock Park                 | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 5                 |   |
| 89  | R    | Goodby's Lake Boat Ramp                | 0                 | 0                 | 0                 | 0                 | 1               | 3               | YES   | 43                |   |
| 90  | T    | Hooters (Jax has additional names)     | 8                 | 0                 | 8                 | 0                 | 0               | 0               |       | 0                 |   |
| 91  | T    | Timuquana Country Club                 | 0                 | 0                 | 10                | 0                 | 0               | 0               |       | 0                 |   |
| 92  | R    | Wayne B Stevens Boat Ramp              | 0                 | 0                 | 0                 | 0                 | 3               | 5               | YES   | 49                |   |
| 93  | R    | Lighthouse Boat Ramp COJ               | 0                 | 0                 | 0                 | 0                 | 2               | 2               | YES   | 16                |   |
| 94  | R    | St Johns Marina at Riverwalk Fountn    | 0                 | 0                 | 0                 | 0                 | 1               | 2               | YES   | 15                |   |
| 95  | T    | COJ @ Friendship Fountn                | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |   |
| 96  | T    | COJ @ Jax Landing                      | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |   |
| 97  | T    | COJ @ Crowne Plaza                     | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |   |

C = Commercial; M = Marina; MF = Multifamily; OT= Other; R=Ramp; SBT=Ship/Barge/Tug; T=Transitory

| No. | Type | Facility name                          | Wet slips<br>2015 | Dry slips<br>2015 | Wet Slips<br>2016 | Dry Slips<br>2016 | No. of<br>Ramps | No. of<br>Lanes | Paved | Parking<br>Spaces | Additional Notes |
|-----|------|--|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------------------|------------------|
| 98  | T    | COJ@ Liberty St                        | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 99  | T    | COJ @ Wyndham                          | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 100 | T    | COJ @ Metropolitan Park                | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 101 | R    | Beach Blvd Boat Ramp(Pottsburg Crk)    | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 12                |                  |
| 102 | R    | Arlington Road Boat Ramp               | 0                 | 0                 | 0                 | 0                 | 1               | 2               | YES   | 13                |                  |
| 103 | R    | Arlington Lions Club Park Boat Ramp    | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 61                |                  |
| 104 | T    | Reddie Pointe Preserve                 | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                  |
| 105 | R    | Lonnie Wurn Boat Ramp                  | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 9                 |                  |
| 106 | R    | Dunn Creek Bridge                      | 0                 | 0                 | 0                 | 0                 | 1               | 1               | NO    | 5                 |                  |
| 107 | R    | Drummond Point                         | 0                 | 0                 | 0                 | 0                 | 1               | 1               | NO    | 5                 |                  |
| 108 | T    | Jackies Restaurant (Seafood)           | 35                | 0                 | 35                | 0                 | 0               | 0               |       | 0                 |                  |
| 109 | R    | Bert Maxwell Boat Ramp                 | 0                 | 0                 | 0                 | 0                 | 2               | 4               | YES   | 45                |                  |
| 110 | R    | T K Stokes Boatramp                    | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 30                |                  |
| 111 | R    | Harborview Boatramp                    | 0                 | 0                 | 0                 | 0                 | 2               | 2               | YES   | 7                 |                  |
| 112 | R    | Charles Reese Boatramp                 | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 6                 |                  |
| 113 | R    | Dinsmore Boat Ramp                     | 0                 | 0                 | 0                 | 0                 | 1               | 2               | YES   | 16                |                  |
| 114 | R    | Brown's Creek Bridge                   | 0                 | 0                 | 0                 | 0                 | 1               | 1               |       | 10                |                  |
| 115 | R/MF | St Johns Landing Estates               | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 0                 |                  |
| 116 | R/MF | St Johns Landing Homeowners Assco      | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 6                 |                  |
| 117 | R    | Palms Fish Camp/COJ                    | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 20                |                  |
| 118 | R    | Fulton Boat Ramp                       | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 7                 |                  |
| 119 | T    | Ft Caroline National Memorial Dock     | 3                 | 0                 | 3                 | 0                 | 0               | 0               |       | 0                 |                  |
| 120 | R    | Gate Petroleum Co                      | 0                 | 0                 | 0                 | 0                 | 1               | 1               | NO    | 2                 |                  |
| 121 | R    | Pirates Cove Fish Camp                 | 0                 | 0                 | 0                 | 0                 | 1               | 1               | NO    | 10                |                  |
| 122 | R    | Joe Carlucci-Sisters Creek Park        | 0                 | 0                 | 0                 | 0                 | 1               | 2               | YES   | 47                |                  |
| 123 | R    | Sisters Creek Marina                   | 0                 | 0                 | 0                 | 0                 | 1               | 4               | YES   | 94                |                  |
| 124 | T    | Fort George Island Ferry (North port)  | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 125 | T    | Singleton's Seafood Shack              | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |
| 126 | R    | Michael B Scanlan Boat Ramp            | 0                 | 0                 | 0                 | 0                 | 2               | 8               |       | 75                |                  |
| 127 | R    | Alimacani Boat Ramp                    | 0                 | 0                 | 0                 | 0                 | 1               | 1               | NO    | 10                |                  |
| 128 | R    | Ribault Club @ Ft George               | 0                 | 0                 | 0                 | 0                 | 1               | 1               |       | 6                 |                  |
| 129 | T    | Kingsley Plantation                    | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |                  |
| 130 | R    | Simpson Creek Park                     | 0                 | 0                 | 0                 | 0                 | 1               | 1               | NO    | 2                 |                  |
| 131 | R    | Big Talbot Island SP                   | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 37                |                  |
| 132 | R    | Oak Harbor Boat Ramp                   | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 28                |                  |
| 133 | R    | Intracoastal Waterways Boat Ramp       | 0                 | 0                 | 0                 | 0                 | 2               | 4               | YES   | 37                |                  |
| 134 | C    | Weeks Marine                           | 0                 | 0                 | 0                 | 0                 | 1               | 1               | YES   | 0                 |                  |
| 135 | C    | All Wet Sports/Suzanne Paul            | 0                 | 25                | 0                 | 25                | 0               | 0               |       | 0                 |                  |
| 136 | SBT  | River Cruises                          | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |
| 137 | SBT  | JEA Park (old JEAS site)               | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |
| 138 | SBT  | Riverfront Dev Group                   | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |                  |
| 139 | SBT  | Commodore Point Prop/N FL Shipyard     | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 140 | SBT  | Hill Street LLC                        | 5                 | 0                 | 5                 | 0                 | 0               | 0               |       | 0                 |                  |
| 141 | SBT  | Hal Jones Contractor Inc               | 0                 | 0                 | 0                 | 0                 | 0               | 0               |       | 0                 |                  |
| 142 | SBT  | Cross State Towing Co                  | 3                 | 0                 | 3                 | 0                 | 1               | 1               | YES   | 0                 |                  |
| 143 | SBT  | 1163 Tallyrand Inc/Crowley Liner Serv  | 18                | 0                 | 18                | 0                 | 0               | 0               |       | 0                 |                  |
| 144 | SBT  | JPA Tallyrand Marine Terminal          | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                  |
| 145 | SBT  | Standard Oil Co (Chevron)              | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 146 | SBT  | Coastal Fuels Terminal                 | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 147 | SBT  | JEA/Kennedy Generating Station         | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                  |
| 148 | SBT  | Keystone Terminal                      | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 149 | SBT  | White Springs AgChem(GA Sthn/FL Rlway) | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |
| 150 | SBT  | Support Terminal                       | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 151 | SBT  | NuStar Energy                          | 5                 | 0                 | 5                 | 0                 | 0               | 0               |       | 0                 |                  |
| 152 | SBT  | US Gypsum Company                      | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 153 | SBT  | Southern Belle Frozen Foods            | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 154 | C    | Trout River Pier 6B Marina             | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                  |
| 155 | SBT  | Gate Concrete Co                       | 2                 | 0                 | 2                 | 0                 | 1               | 0               |       | 0                 |                  |
| 156 | SBT  | US Navy Fuel Depot                     | 1                 | 0                 | 1                 | 0                 | 0               | 1               | YES   | 0                 |                  |
| 157 | SBT  | BP Oil                                 | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 158 | SBT  | Amerada Hess Fuel Oil Inc              | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 159 | C    | One Dock Builders                      | 8                 | 0                 | 8                 | 0                 | 0               | 0               |       | 0                 |                  |
| 160 | SBT  | JaxPort-Ed Austin Marine Terminal      | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 161 | SBT  | TraPac Terminal                        | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |
| 162 | SBT  | JaxPort Bulk Terminal                  | 7                 | 0                 | 7                 | 0                 | 0               | 0               |       | 0                 |                  |
| 163 | SBT  | Jax Port Authority                     | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |                  |
| 164 | SBT  | JPA/Blount Island                      | 8                 | 0                 | 8                 | 0                 | 0               | 0               |       | 0                 |                  |
| 165 | SBT  | B P B Acquisitions (Formerly Celotex)  | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 166 | SBT  | ESI of Florida LLC                     | 11                | 0                 | 11                | 0                 | 0               | 0               |       | 0                 |                  |
| 167 | SBT  | Terminal Services                      | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |                  |
| 168 | C    | Kenneth Vogelsong                      | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |

C = Commercial; M = Marina; MF = Multifamily; OT = Other; R=Ramp; SBT=Ship/Barge/Tug; T=Transitory

| No. | Type | Facility name                         | Wet slips<br>2015 | Dry slips<br>2015 | Wet Slips<br>2016 | Dry Slips<br>2016 | No. of<br>Ramps | No. of<br>Lanes | Paved | Parking<br>Spaces | Additional Notes |
|-----|------|---------------------------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------------------|------------------|
| 169 | SBT  | JEA North Generating Station Dock     | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 170 | SBT  | Jax Port Authority - 4916             | 2                 | 0                 | 2                 | 0                 | 3               | 0               |       | 0                 |                  |
| 171 | C    | Florida East Coast Shrimp Producers   | 9                 | 6                 | 9                 | 6                 | 0               | 0               | YES   | 0                 |                  |
| 172 | C    | M & M Shrimp Dock Inc                 | 2                 | 0                 | 2                 | 0                 | 0               | 0               |       | 0                 |                  |
| 173 | SBT  | U.S. Marine Corp                      | 3                 | 0                 | 3                 | 0                 | 0               | 0               |       | 0                 |                  |
| 174 | C/ST | Atlantic Dry Dock Corp                | 10                | 6                 | 10                | 6                 | 0               | 0               |       | 0                 |                  |
| 175 | C    | St Johns Boat Co                      | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                  |
| 176 | SBT  | Mayport Naval Station                 | 34                | 0                 | 34                | 0                 | 0               | 0               |       | 0                 |                  |
| 177 | SBT  | JPA/Mayport Ferry Slip                | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 178 | SBT  | JPA/Formerly LA Cruise                | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 179 | C    | JPA/Roland Ice Co                     | 8                 | 0                 | 8                 | 0                 | 0               | 0               |       | 0                 |                  |
| 180 | C    | JPA/Gilmer Pier                       | 7                 | 0                 | 7                 | 0                 | 0               | 0               |       | 0                 |                  |
| 181 | C    | JPA/Hornblower Marine/Ferry Maint Yrd | 1                 | 0                 | 1                 | 0                 | 0               | 0               |       | 0                 |                  |
| 182 | C    | JPA/Formerly Atlantic Seafood Co      | 0                 | 0                 | 0                 | 0                 | 0               | 0               |       | 0                 |                  |
| 183 | C    | JPA/Mat Roland Seafood                | 0                 | 0                 | 0                 | 0                 | 0               | 0               |       | 0                 |                  |
| 184 | C    | Miss Becky Seafood/Safe Harbor Mkt    | 20                | 0                 | 20                | 0                 | 0               | 0               |       | 0                 |                  |
| 185 | C    | Rebecca Pack                          | 4                 | 0                 | 4                 | 0                 | 0               | 0               |       | 0                 |                  |
| 186 | SBT  | U.S. Coast Guard - Mayport            | 6                 | 0                 | 6                 | 0                 | 0               | 0               |       | 0                 |                  |
| 187 | SBT  | Moody Land Co/Bellinger Shipyard      | 12                | 0                 | 12                | 0                 | 0               | 0               |       | 0                 |                  |

C = Commercial; M = Marina; MF = Multifamily; OT= Other; R=Ramp; SBT=Ship/Barge/Tug; T=Transitory

**Figure 63. Table of Marine Facilities in Jacksonville (Duval County) Florida 2018.**

**Development slips specific to the downtown DRI:**

The number of slips in downtown Jacksonville was increased by 175 slips from 789 to 964, and supporting justifications for these slips were provided by letters outlining the City's commitments, and the regulatory agencies authorizations for the slip increase (MPP Implementation Report 2017). This sub-inventory includes tracking of development slips specific to the downtown DRI area. Note that 194 slips have actually been constructed.

| FACILITY             | ADDRESS/LOCATION      | NUMBER OF SLIPS<br>ALLOCATED | NUMBER OF SLIPS<br>CONSTRUCTED |
|----------------------|-----------------------|------------------------------|--------------------------------|
| River City Brewing   | 835 Museum Cir        | 62                           | 62                             |
| Berkman Plaza        | 400 E. Bay St.        | 54                           | 54                             |
| Shipyards            | 750 E. bay St         | 400                          |                                |
| Metro Park           | 1410 Gator Bowl Blvd. | 78                           | 78                             |
| Aetna Site           | Prudential Dr         | 128                          |                                |
| St. Johns/The Strand | Riverplace BLVD.      | 75                           |                                |
| The District         | 801 Broadcast Pl      | 125                          |                                |
| COJ                  | Along the Riverwalk   | 50                           |                                |
| <b>TOTAL</b>         |                       | <b>972</b>                   | <b>194</b>                     |

## Waterways Commission Meeting Summaries

The Jacksonville Waterways Commission was established in 1984 to study and make recommendations to the City Council with respect to the improvement, development and protection of the St. Johns River and all tidal waters in Duval County. The Commission is charged to formulate an overall plan for dealing with any problems that exist the St. Johns River and Duval County tidal waters and devise methods of developing future uses of those waterways.

The Commission serves as the Duval County committee to review rules proposed by the Florida Fish and Wildlife Conservation Commission governing speed and operation of motorboats to protect manatees. And acts as a coordinating agency and specialized advisor for governmental units and for programs and activities affecting the improvement, development and protection of the St. Johns River and all tidal waters in Duval County.

| DATE                    | DISCUSSION  |
|-------------------------|---|
| <b>October 11, 2017</b> | <p>Dr. Quinton White reported that as a result of Hurricane Irma and nor'easter, the St. Johns River is experiencing a big salinity flush. There is a high fluctuation of salinity at the mouth of the river. The waters coming in and going out at low and high tides are causing the high level of salinity fluctuation. Water temperature is relatively warm because of the unusually hot weather that is still with us.</p> <p>In agreeing with Commissioner Pringle's remarks, Dr. White noted that we are seeing a lot of debris in the water.</p> <p>Dr. Gerard Pinto walked the Commission through a number of years' necropsy reports in his report on manatee fatalities data that the Commission had requested at its September meeting. He reported that on an aerial survey the previous week, 11 manatees were sighted. To date, there have been 5 watercraft-related fatalities this year. None of the five has have been linked to large vessels.</p> <p>Dr. Pinto explained that there were nine (9) manatee death categories. The categories are: watercraft; crushed/drowned in flood gate or canal lock; other human-related; perinatal; cold stress; other natural; undetermined-too decomposed; undetermined-other; and verified/not recovered.</p> <p>Dr. Pinto reviewed the year 2016. There were twelve manatee fatalities in the year. The first fatality of the year was in January and occurred in Tallyrand at a locale Dr. Pinto pointed out on the map that was a part of his PowerPoint.</p> <p>Dr. Pinto described the formal report form that detailed particulars of the fatality such as where the fatality occurred, when it was reported, and the date that the necropsy was performed. Dr. Pinto explained that he usually goes right to the cause of the fatality. On this particular incident, the cause was propeller-acute. Typically, the manatee is sent to a lab in St. Petersburg. The manatee's</p> |

external condition and its internal organs are examined in the St. Petersburg necropsy or at a local field necropsy. Dissecting the carcass follows. The material that Dr. Pinto had distributed illustrated stages of a necropsy. Dr. Pinto said that he was particularly interested in the significant findings portion of the report. Last year we had one watercraft-related fatality; this year there has been five and so there has been an uptick.

Dr. White fielded numerous questions.

Council Member Boyer explained that Dr. Pinto's presentation had been requested because there had been some thoughts raised about possibly amending the Manatee Protection Plan to enable seasonal boating and other events in the river downtown. We needed to know how many manatees were in the river downtown at certain times of the year.

Dr. Pinto fielded a number of questions.

**November 15, 2017** Dr. Gerard Pinto, Jacksonville University, reported on the 2017 State of the River Report for the Lower St. Johns River Basin. The initial report was issued in 2008. The report is a compilation of research undertaken by Jacksonville University, the University of North Florida, Florida Southern College and the City of Jacksonville's Environmental Protection Board. The report is funded by the Environmental Protection Board. Dr. Pinto explained that the purpose of the report is to inform the public about the Lower St. Johns River Basin's health and provide assessments of the status of conditions and trends in the health of the river.

Dr. Pinto explained that the report focused on topics that included water quality, fisheries, aquatic life, tributaries, and contaminants. In assessing water quality, the report examined the status and trends of indicators that include salinity, fecal coliform, turbidity, dissolved oxygen, algal blooms, nitrogen and phosphorus. The status was either satisfactory or unsatisfactory, and trends were improving, worsening or unchanged.

Council Member Boyer wanted to know what we could do to address and resolve the problem of fecal coliform in the river and its tributaries.

Dr. Pinto's presentation was truncated because of the length of the meeting's agenda.

He will continue and conclude his report at the next (December) Commission meeting and, in the meantime, will e-mail the full report to the Commissioners. The Chair announced that Dr. Pinto will be first on December's agenda.

**December 13, 2017** Dr. Gerard Pinto continued his presentation on the State of the River Report 2017. His presentation at the November 15, 2017 meeting had been shortened because of time constraints.

Dr. Pinto reported that the wetlands continue to be an issue. He explained that the wetlands were important for flood protection. The wetlands condition is trending unsatisfactory. The number of threatened species in the wetlands (manatees, bald eagles, storks) is growing. A problem in the tributaries is the amount of contaminants.

Council Member Lori Boyer reiterated her concern about the water quality in the tributaries. In particular, she wanted to know what we can do to reduce the fecal coliform in the river's tributaries. Dr. Pinto explained that while the fecal coliform issue is trending to slightly improved, we need to get people off of septic tanks. The public needs to know what is happening in the tributaries. Ms. Boyer indicated that Craig Creek was located in her Council District and that septic tanks were not the issue there. Commissioner Michelle Tappouni reported that the Environmental Protection Board has been discussing the fecal coliform issue. The Board has taken a look at McCoy's Creek. The EPB felt that it was imperative to make the public aware of this issue. Dr. Pinto said that the City's Environmental Quality Division is trying to determine if the fecal coliform in the tributaries is from animals or humans.

The Chair, Council Member Boyer, noted that the Waterways Commission is the City's venue to study the conditions of the wetlands. She will put the wetlands on the agenda for the Commission's January meeting.

Commissioner Lindsey Brock wanted to know if we had data on the total acreage of wetlands that are preserved in Duval County.

Commissioner Steve Swann referenced graphs in the State of the River Report that indicated that as the purchase of mitigation credits for the wetlands is on the rise, preservation initiatives have lessened. Is this good or bad? It is an item that will be on either the January or February meeting agenda.

Next on the agenda was the St. Johns River Status Report on Water Quality and Manatees.

Dr. Quinton White reported that the salinity in the river has significantly increased recently. Water level is a foot above normal. Dolphins have moved away from the area because of the salinity. Dr. White explained that NOAA (National Oceanic Atmospheric and Administration) has sensors in the river that provide scientific data.

Dr. Gerard Pinto reported that on a September 28<sup>th</sup> aerial survey ten manatees had been sighted. A mother and calf were sighted near the Ortega basin; they

will need to be rescued. There have been seventeen (17) manatee deaths for the year. Five were watercraft related; five were perinatal; one death caused by cold stress; one from natural causes; and five fatalities the cause of which is undetermined.

**January 10, 2018**

Dr. White reported that there was not a lot going on in the river because of the water being as cold as it is. The water temperature at J.U. was 48° to 50°. The salinity in the water is on the increase following the extended period of fresh water caused by Hurricane Irma. The waters have been pretty tidal.

Dr. Pinto reported that on synoptic aerial flights December 7<sup>th</sup> and 8<sup>th</sup>, not many manatees were seen in the area. The aerial survey went as far south as Palatka.

The Chair, Council Member Lori Boyer wanted to know, in view of the fact that virtually no manatees were spotted in the river because of the cold temperatures, how do we now assess the need for a modification of the Manatee Protection Plan that bars certain activities such as boat racing in the river during winter months? Dr. White replied that boat racing in the downtown river area would be too dangerous because that segment of the river is so turbulent. In addition to being a threat to manatees that could possibly be in the river, boat racing is hazardous to drivers. Racing drivers had been killed in the past. Dr. Pinto added that manatees had, in fact, been known to be in the river when water temperatures were cold.

On Legislation Matters, Jody McDaniel, Planning & Development Department, explained Ordinance **2017-837**, Apv 4<sup>th</sup> Edition of Duval County Manatee Protection Plan as Required by the Fla Fish & Wildlife Conservation Comm. The 4<sup>th</sup> Edition would allow a provision for an additional 125 boat slips for downtown, for a total of 175 slips. Guy Parola, DIA Operations Manager, explained that 50 slots would be allotted to The District development site. In Public Comment, John Nooney said that he sees restrictions to public access to the river if the legislation is enacted. On a **vote of 11-1, (Swann abstaining)**, the Commission voted to recommend approval of the item.

**February 14, 2018**

Dr. Quinton White reflected on the cold weather that we have had recently and reported that the offshore water temperature has been 10° degrees colder than normal. He reported that Ocearch had embarked on an expedition that began in mid-January and early February and had been unable to catch any sharks. The thinking has been that it is because the water temperature has been extremely cold, too cold for the sharks. When bait fish was put into the water, there were no bait fish to be seen. It was that cold.

Manatees are not currently being seen in the area but it will soon start to warm up and is not too early to implore people to be alert because in another forty to sixty days, manatees will be back in the area.

On February 24<sup>th</sup>, the Jacksonville Zoo will be hosting a manatee festival and JU officials will be on hand for public education and outreach.

Dr. Gerard Pinto reported that a state-wide synoptic manatee survey was undertaken in January and the results are now out. There are 6,131 manatees in the State of Florida. Last year the count was actually higher, 6,620. As for manatee mortality, Jacksonville has had two mortalities this year. Cold stressed manatees were recovered in the Ortega River. There are some manatees that linger and are susceptible during cold snaps and they have to be either recovered or rescued.

Commissioner Raymond Pringle inquired about Dr. White's report of Ocearch not being able to locate sharks in Florida's waters in January. Dr. White explained that the waters here have never been as cold.

Commissioner Stephen Swann inquired about the impact of the cold weather and water on right whales. Do the whales move further south?

The next item on the agenda was the Manatee Protection Plan Implementation Report by Dr. Pinto. Dr. Pinto explained that in the past, the report was presented to the Waterways Commission in November and the Commission had a month to peruse the document and offer comments; the Commission subsequently voted to approve the document.

Dr. Pinto explained that this is the annual update of the Manatee Protection Plan and Implementation Report that Jacksonville University puts together every year. The Chair requested that if it is not time-sensitive that the document be electronically sent again to everyone; she asked everyone to read it; she wanted the Commission to be comfortable with the report's content and be prepared to vote on approving the report at next month's (March) Commission meeting.

**March 14, 2018**

Dr. Gerard Pinto's report on the 2017 Manatee Protection Plan Implementation Report. At the Commission's previous meeting, the Chair requested that the Commissioners carefully review the 2017 Manatee Protection Plan Implementation Report that Dr. Pinto had distributed in preparation for a recommendation that is required. **By a vote of 9-0, the Commission voted to**



**recommend approval** of the 2017 Manatee Protection Plan Implementation Report.

The Chair, Council Member Boyer, announced that she had met the previous week with the Sports and Entertainment Office on the possibility of modifying the Manatee Protection Plan to allow boating events on the river during a period in the course of the year when there were the least number of manatees in the river. The Sports and Entertainment Office suggested that the Waterways Commission come up with recommendation on possible locations on the river and monitoring devices.

In the St. Johns River Status Report on Water Quality and Manatees, Dr. White reported that the river's water temperature has been low. The levels of salinity have returned to normal; rainfall is below normal. Dr. White indicated that the impact of Hurricane Irma is still prevalent with a lot of debris and dirt in the river; the levels of nutrients are high. Dr. White explained that the lack of rain and the high level of nutrients in the river could cause algae blooms.

Dr. White reported that the final review and editing of the report of the Maritime Management Plan is underway. He also reported that the recent manatee festival at the Jacksonville Zoo was a huge success.

Dr. Pinto reported that there have been 35 manatee deaths in Florida in 2018 largely as a result of cold weather that the state had incurred in winter months. In our area, two manatee fatalities were reported, one in the river and one in the IntraCoastal Waterway, both cold stress related. There have been four (4) manatee deaths in our area since the beginning of the year, 2 in January and 2 in February, all cold stress related.

**April 11, 2018**

Dr. Quinton White reported that manatees are back and it appears that they have returned earlier than in previous years. Rainfall is one or two inches lower than the usual four inches and that has allowed salinity in the river to get back to its typical range. The river's water temperature is cold. Colder nights have kept the temperature in the 60s.

Dr. White reported that the Manatee Management Plan is proceeding on time; all of the edits will be finalized on Friday; the finalized draft will be posted on Monday, April 16<sup>th</sup> and the final draft will be brought back to the Waterways Commission at the May 9<sup>th</sup> monthly meeting of the Waterways Commission for the Commission's approval.

Dr. Pinto reported that media day was held on April 6<sup>th</sup> to publicize the opening of the boating season. A press conference was held at Metropolitan Park. Law enforcement officials were there remind the public what is expected of them. As far as manatees are concerned, the water temperature is still below the threshold for the return of a large number of manatees but there but some of the animals have been reported seen in the area, mostly at warm water outfalls at

JEA generating stations. Between mid-May and June, we can expect 300 to 350 manatees in the area. As daylight increases, manatees can be expected to migrate to the area in larger numbers. Dr. Pinto reported that there three cold stress manatee fatalities and one where the cause is undetermined. No watercraft-related deaths have been reported, to date.

Dr. White indicated that Assistant General Counsel Paige Johnston had advised him that FIND required that a Waterways Resolution be approved by the Commission accepting the Maritime Management Plan. The Chair requested that Ms. Johnston draft a resolution for the Commission to act on at the next Commission meeting.

**May 9, 2018**

Dr. Gerard Pinto of Jacksonville University reported 2 manatee deaths since the last commission meeting – 1 of undetermined cause near Goodby’s Creek and 1 of undetermined cause in the main channel of the river near the mouth of the Trout River. Dr. Quinton White reported that the river temperature is warming and the salinity is fluctuating but gradually increasing in the absence of recent rainfall, although the river is considerably fresh beyond the Fuller Warren Bridge. He noted that NOAA’s Port of Jacksonville water and weather data monitoring stations may be discontinued in June as a result of a lack of continued federal funding, but some aspects of the data may be picked up by the U.S. Geological Survey as part of the monitoring related to the harbor dredging project. Jacksonville University has recently procured new sampling equipment that will measure dissolved oxygen, PH, and chlorophyll A (an indicator of algae level and therefore of nutrient level) in addition to the current temperature and salinity. Dr. White noted the continuing presence of considerable debris in the river as an after-effect from Hurricane Irma and urged boaters to use caution on the water. Ms. Boyer noted that the NOAA data would no longer be available as a water-related amenity for boaters and others with an interest in the river and that if the monitoring stops, the need for the lease of monitoring site on the Southbank Riverwalk at Friendship Fountain will end. Commissioner Swann said that the NOAA data is very useful for tracking conditions in the river, particularly changes caused by major events like hurricanes, and Dr. White lamented the loss of a very valuable data source. Chairwoman Boyer wondered if funding might be obtained through FEMA as part of the City’s resiliency efforts to keep the system operating. Dr. White said the 19-station monitoring system was originally installed with Department of Homeland Security funding. Ms. Boyer will raise the issue with the City’s Emergency Preparedness Division.

**June 13, 2018**

Dr. Quinton White provided the St. Johns River Status Report on Water Quality and Dr. Gerard Pinto reported on the status of Manatees.

Dr. White reported that this is always an interesting time of the year. There is a considerable amount of fresh water in the river because of Hurricane Irma and recent, heavy rainfall. Salinity of the river had crept up; the heavy rainfalls have reversed the level of salinity. Dr. White reported that the water temperature is not quite as hot; we probably will not see the algae blooms this year; we are not seeing a nutrient build-up, the amount of fresh water in the system is considerable and there has not been the warmth. All of this could change; the rainfall could taper off and temperatures could skyrocket.

With regard to the artificial reefs, the growth of life on the reefs is down because of the fluctuation of salinity and other factors.

Dr. White reported that there are a healthy number of dolphins in the river, though Captain Suber has reported that a dolphin carcass was recently found near Metro Park.

Florida Fish & Wildlife will perform a necropsy and we will monitor the situation.

Dr. Pinto reported that he had an opportunity to do an aerial survey of manatees on May 24<sup>th</sup>. Very few manatees were seen. Usually, manatees begin to return to the area in May. There has been a year when the manatees' arrival has been late. Most of the manatees seen during the aerial were south of the Buckman Bridge. There were a few north of the bridge. There are no manatee fatalities to report since the last Commission meeting. To date, there have been six deaths so far this year, three resulting from cold stress and three whose cause is undetermined. Council Member Love noted that Fishweir Creek has recently undergone an aquatic restoration project and asked if this transformation is likely to attract manatees to the creek. Dr. Pinto felt that manatees would, in fact, be attracted to the creek.

**July, 2018**

No meeting

**August 15, 2018**

Legislation

**Ordinance 2018-540**, Auth Contract with Jax Univ for the Continuing Manatee Protection Studies for FY 2018-2019, Subject to Approp by City Council...Jody McDaniel, Planning & Development Department, explained why the County is mandated by the State of Florida to have a Manatee Protection Plan in place and to contract with consultants like Dr. White & Dr. Pinto to monitor manatees and implement the Manatee Protection Plan. Dr. White provided a brief history of the contract with Jacksonville University. He recounted a discussion that he had had with former City Council Member Jim Tullis in 1993 about the Florida Fish

and Wildlife Conservation Commission creating a twenty-five (25) MPH speed limit on the river because of the high number of manatee fatalities incurred by manatees being struck by motor boats. Messrs. Tullis and White devised a plan to satisfy the Florida Fish and Wildlife Conservation Commission. The solution to the problem included the creation of the Manatee Protection Plan.

Council Member Al Ferraro asked if the manatees' designation as endangered was changed to threatened, would the Manatee Protection Plan remain intact. Dr. White replied that in all likelihood the Plan would remain intact.

Assistant General Counsel Paige Johnston commented on the contract with Jacksonville University, referencing specific provisions in the contract.

**By a vote of 11-0, the Commission voted to recommend approval of Ordinance 2018-540.**

In the monthly St. Johns River Status Report on Water Quality and Manatees, Dr. Quinton White characterized the year as strange. He reported that in the past 57 days, it has rained in Jacksonville for 42 days. The considerable rainfall has resulted in higher levels of fresh water, salinity levels have lessened, habitats have changed and there has been an increase in turbidity. Nutrients in the river have been increased by the rain depositing debris from the streets and runoff. These factors result in the prevalence of toxic algae blooms. Dr. White explained that dredging in the river will ultimately increase salinity.

Dr. Gerard Pinto reported that he did an aerial survey in the past week. He reported that there are not many manatees in the river or tributaries which is unusual. He sighted fifteen (15) manatees. He explained that in the month of June, there are usually at least 150 manatees in the river. Dr. Pinto cited the increased turbidity in the river as the cause for so few manatees. The grass beds, vital for manatees, have been sparse. Grass beds need light and turbidity darkens the water. Dr. Pinto explained that with fewer manatees around, there are fewer manatee fatalities to report. Recently, none.

**September 12, 2018**

In the St. Johns River Status Report on Water Quality and Manatees, Dr. Quinton White noted the anniversary of Hurricane Irma and commented on the potential havoc of impending Hurricane Florence. He felt that the potential danger of Hurricane Florence was heightened by the fact that the hurricane would make landfall when the tides are particularly high. Dr. White envisioned a huge tidal surge creating a Harvey-like situation; the storm would hover over the area dumping a considerable amount of rain.

Dr. White reported that salinity in the river remains low because of rainfall. The salinity level is being monitored. Green and blue-green algae are being monitored. He explained that the algae are linked to biosolids. He announced that the Algae Bloom Task Force will be meeting in a week.

Dr. White reported that this has not been a good year for manatees noting that there have been 599 manatee fatalities reported statewide; a considerable number of those deaths are linked to algae blooms.

Dr. Gerard Pinto reported that there have been relatively few manatees in the area; the manatees have moved southward. There have been six manatee deaths to report this year, three linked to cold stress and three whose cause of death was undetermined. Dr. Pinto explained that of the 599 manatee deaths in 2018 (statewide), 130 are thought to be red tide related. In the previous year, 2017, there were 538 manatee deaths statewide.

Note that manatee mortalities reported at waterways meetings are considered to be preliminary data at that time. Designations of the causes of mortality are subject to change pending finalized necropsy reports.

## Law Report Summary

Good coordination and communication with the law enforcement agencies responsible for enforcing manatee speed zones within the county is an essential element of manatee protection. Although the City has minimal data to compare to previous years, the continued tracking of law enforcement efforts will allow the City to provide better analysis in future implementation reports.

The L.E. Task Force has become a valuable method for all law enforcement agencies to communicate and coordinate efforts. All federal, state, and local agencies are committed to assisting the City in boating compliance. The meetings are well attended. All agencies attended the JSO Media Awareness Day.

## MEDIA ADVISORY

### Annual Boating Safety & Manatee Enforcement News Conference

**Who:** Members of the local media are invited to join the Jacksonville Sheriff's Office; the Florida Fish and Wildlife Conservation Commission; Dock Master for the City of Jacksonville, Jim Suber; and representatives from local organizations

**What:** A news conference to discuss boating safety and the joint enforcement effort

**When:** Friday, April 6, 2018 at 10 a.m.

**Where:** Jacksonville Fire and Rescue/Jacksonville Sheriff's Office Dock at Metropolitan Park, 1408 Gator Bowl Boulevard, Jacksonville, FL 32202

**Why:** To kickoff boating season

For information on the Manatee Mortality Statistics, please visit <http://myfwc.com/research/manatee>.

For more information on Boating Under the Influence (BUI), please visit <http://uscgboating.org/recreational-boaters/boating-under-the-influence.php>.

**Connect with us:** [jaxsheriff.org](http://jaxsheriff.org)



*The Mission of the Jacksonville Sheriff's Office is: "To Serve and Protect in Partnership with Our Community."*

**A. Jacksonville Sheriff's Office**

In 2014, JSO spent a total of 105 hours patrolling manatee zones in Duval County, issued 5 citations and 41 warnings.

In 2015, the number of hours the JSO had a manatee zone presence increased 1.511% (1,692 hrs.) from the previous year. There were 2 more citations issued than in 2014 (+40%), and the number of warnings decreased by (61%) from 41 to 16.

| <b>FOCUS AREA</b>                         | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> | <b>Manatee Related Incidents <sup>1</sup></b> |
|---|---------------------------|------------------|-----------------|---|
| Julington Creek                           | 43                        | 4                | 2               |   |
| County Line - Buckman Brg                 | 50                        |                  |                 |   |
| Buckman Brg - Fuller Warren Brg           | 83                        |                  |                 |   |
| Goodbys Creek                             | 31                        |                  |                 |   |
| Ortega River                              | 19                        |                  |                 |   |
| Fuller Warren Brg - Main Street Brg       | 148                       |                  | 5               |   |
| Main Street Brg - Hart Brg                | 233                       |                  |                 |   |
| Hart Brg - Matthews Brg / Arlington River | 222                       | 1                |                 |   |
| Matthews Brg - Reddie Pt                  | 365                       | 2                | 7               |   |
| Trout River                               | 60                        |                  |                 |   |
| Reddie Pt - Blount Island                 | 138                       |                  |                 | 1*  |
| Blount Island - ICW                       | 111                       |                  |                 |   |
| ICW North                                 | 61                        |                  |                 |   |
| ICW South                                 | 58                        |                  | 1               |   |
| ICW - Jetties                             | 70                        |                  | 1               |   |
| <b>TOTAL</b>                              | <b>1,692</b>              | <b>7</b>         | <b>16</b>       | <b>1</b>                                      |

**JSO 2015 Sept.**

\*On Aug. 4<sup>th</sup>, FWC recovered a manatee carcass in Jacksonville, just west of the Dames Point Bridge (30.382611, -81.561023). She had previously been PIT tagged and was identified as a well-known animal, Jessica, who regularly visited Blue Springs State Park. The head and right pectoral flipper were missing, due to a transecting watercraft-related wound. The animal was estimated at over 11' in length (female).

In 2016, JSO spent 1,551 hours patrolling manatee zones. This represented a decrease of 141 hrs. (-8%) from the previous year. In addition, JSO issued 11 citations (+57%, or 4 more than in 2015), and 326 warnings (+1,978% or 310 more than in 2015). The Marine Unity consisted of 3 patrol officers.

| <b>FOCUS AREA</b>                        | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> | <b>Manatee Related Incidents <sup>1</sup></b> |
|--|---------------------------|------------------|-----------------|---|
| Julington Creek                          | 46                        |                  | 12              |   |
| County Line - Buckman Brg                | 52                        |                  |                 |   |
| Buckman Brg - Fuller Warren Brg          | 90                        |                  |                 |   |
| Goodbys Creek                            | 23                        |                  |                 |   |
| Ortega River                             | 33                        |                  | 3               |   |
| Fuller Warren Brg - Main Street Brg      | 134                       | 3                | 37              |   |
| Main Street Brg - Hart Brg               | 164                       |                  | 88              | a   |
| Hart Brg - Matthews Brg /Arlington River | 201                       | 3                | 25              |   |
| Matthews Brg - Reddie Pt                 | 285                       | 4                | 65              |   |
| Trout River                              | 76                        |                  |                 |   |
| Reddie Pt - Blount Island                | 119                       |                  | 8               |   |
| Blount Island - ICW                      | 100                       |                  | 7               |   |
| ICW North                                | 53                        |                  | 39              |   |
| ICW South                                | 74                        | 1                | 33              | b   |
| ICW - Jetties                            | 101                       |                  | 9               |   |
| <b>TOTAL</b>                             | <b>1,551</b>              | <b>11</b>        | <b>326</b>      | <b>2</b>                                      |

**JSO 2016 Sept.**

a=Dead manatee recovered from FWC at Shipyards 03/18/2016 (cause of death unknown)

b= 3 of 4 signs removed during construction project, unenforceable zone.

JSO Marine Unit had 3 officers on duty.



In 2017, JSO spent 3,297 hours patrolling manatee zones. This represented an increase of 1,746 hrs. (+113%) from the previous year. In addition, JSO issued 2 citations (-82% or 9 less than in 2016), and 537 warnings (+65%, or 211 more than in 2016). The Marine Unity had 2 patrol officers on duty, (1 less than in 2016).

| <b>FOCUS AREA</b>                        | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> | <b>Manatee Related Incidents<sup>1</sup></b> |
|--|---------------------------|------------------|-----------------|--|
| Julington Creek                          | 63                        | 1                | 13              | 0  |
| County Line - Buckman Brg                | 97                        | 0                | 0               | 0  |
| Buckman Brg - Fuller Warren Brg          | 128                       | 0                | 10              | 0  |
| Goodbys Creek                            | 36                        | 0                | 6               | 0  |
| Ortega River                             | 55                        | 0                | 9               | 0  |
| Fuller Warren Brg - Main Street Brg      | 370                       | 0                | 81              | 0  |
| Main Street Brg - Hart Brg               | 448                       | 0                | 203             | 3  |
| Hart Brg - Matthews Brg /Arlington River | 400                       | 1                | 22              | 0  |
| Matthews Brg - Reddie Pt                 | 571                       | 0                | 124             | 2  |
| Trout River                              | 113                       | 0                | 4               | 0  |
| Reddie Pt - Blount Island                | 312                       | 0                | 5               | 0  |
| Blount Island - ICW                      | 289                       | 0                | 22              | 0  |
| ICW North                                | 86                        | 0                | 22              | 0  |
| ICW South*                               | 178                       | 0                | 11              | 0  |
| ICW - Jetties                            | 151                       | 0                | 5               | 0  |
| <b>TOTAL</b>                             | <b>3,297</b>              | <b>2</b>         | <b>537</b>      | <b>5</b>                                     |

**JSO 2017 Sept.**

\*Signage missing, unable to enforce zone  
JSO Marine Unit had 2 officers on duty.

In 2018, JSO spent 6,634 hours patrolling manatee zones. This represented an increase of 3,337 hrs. (+101%) from the previous year. In addition, JSO issued 41 citations (+1,950%, 39 more than in 2017), and 1,543 warnings (+187%, or 1,006 more than in 2017). The Marine Unity had 8 patrol officers on duty, (6 more than in 2017).

| <b>FOCUS AREA</b>                                 | <b># of patrols</b> | <b>Citations</b> | <b>Warnings</b> | <b>Manatee related Incidents</b> |
|---|---------------------|------------------|-----------------|----------------------------------|
| Julington Creek                                   | 114                 | 0                | 23              | 0                                |
| County Line - Buckman Bridge                      | 130                 | 0                | 12              | 0                                |
| buckman Bridge - Fuller Warren Bridge             | 301                 | 0                | 52              | 6                                |
| Goodbys Creek                                     | 116                 | 0                | 44              | 1                                |
| Ortega River                                      | 176                 | 1                | 62              | 5                                |
| Fuller Warrant Bridge - Main St Bridge            | 621                 | 19               | 208             | 21                               |
| Main St Bridge - Hart Bridge                      | 797                 | 10               | 236             | 14                               |
| Hart Bridge - Matthews Bridge and Arlington River | 958                 | 3                | 225             | 9                                |
| Matthews Bridge - Reddie Point                    | 1,100               | 2                | 185             | 7                                |
| Trout River                                       | 283                 | 0                | 37              | 0                                |
| Reddie Point - Blount Island                      | 533                 | 0                | 55              | 0                                |
| Blount Island - ICW                               | 529                 | 1                | 77              | 3                                |
| ICW North   | 273                 | 3                | 118             | 5                                |
| ICW South   | 291                 | 2                | 67              | 17                               |
| ICW- Jetties                                      | 412                 | 0                | 142             | 19                               |
| <b>TOTAL</b>                                      | <b>6,634</b>        | <b>41</b>        | <b>1,543</b>    | <b>107</b>                       |

**JSO 2018 Sept.**

In summary, from 2015 to 2018, JSO hours on the water patrolling manatee zones increased from 1,692 to 6,634 Hrs. (+292 % or +4,942 Hrs.); citations issued increased from 7 to 41 (+486% or +34); and warnings increased from 16 to 1,543 (+9,544 % or 1,527 warnings). In addition, the number of available officers increased from 3 in 2015 to 8 in 2018 (+300%). Moreover, specific manatee related incidents increased from 1 in 2015 to 107 in 2018 (+2,040%).

| <b>YEAR</b> | <b># of patrols</b> | <b>Citations</b> | <b>Warnings</b> | <b>Manatee related Incidents</b> | <b>Officers</b> |
|-------------|---------------------|------------------|-----------------|----------------------------------|-----------------|
| 2014        | 105                 | 5                | 41              | 0                                | -               |
| 2015        | 1,692               | 7                | 16              | 1                                | -               |
| 2016        | 1,551               | 11               | 326             | 2                                | 3               |
| 2017        | 3,297               | 2                | 537             | 5                                | 2               |
| 2018        | 6,634               | 41               | 1,543           | 107                              | 8               |

**B. Florida Fish and Wildlife Commission**

The City of Jacksonville began to receive quarterly reports from FWC in November 2014. In the 2014-2015 year, FWC gave 161 citations for the Duval County area. FWC cited more boats in the ICW and the downtown area.

| <b>FWC 2015</b>                           | <b># of times<br/>in area</b> | <b>Citations</b> | <b>Warnings</b> |
|---|-------------------------------|------------------|-----------------|
| FOCUS AREA                                |                               |                  |                 |
| Julington Creek                           |                               | 15               |                 |
| County Line - Buckman Brg                 |                               |                  |                 |
| Buckman Brg - Fuller Warren Brg           |                               | 2                |                 |
| Goodbys Creek                             |                               |                  |                 |
| Ortega River                              |                               | 5                |                 |
| Fuller Warren Brg - Main Street Brg       |                               | 22               |                 |
| Main Street Brg - Hart Brg                |                               | 7                |                 |
| Hart Brg - Matthews Brg / Arlington River |                               | 12               |                 |
| Matthews Brg - Reddie Pt                  |                               | 5                |                 |
| Trout River                               |                               |                  |                 |
| Reddie Pt - Blount Island                 |                               | 1                |                 |
| Blount Island - ICW                       |                               |                  |                 |
| ICW North                                 |                               | 20               |                 |
| ICW South                                 |                               | 32               |                 |
| ICW - Jetties                             |                               | 12               |                 |
| In St. Johns River                        |                               | 23               |                 |
| not marked location                       |                               | 5                |                 |
| <b>TOTAL</b>                              |                               | <b>161</b>       |                 |

**FDLE 2015.**

In the 2015-2016 year, FWC gave 68 citations for the Duval County area. FWC cited more boats in the ICW, downtown area, and Julington Creek. There were significantly less citations issued than the previous year, with 93 fewer citations issued as compared to 2015.

| <b>FWC 2016</b>                          | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> |
|--|---------------------------|------------------|-----------------|
| <b>FOCUS AREA</b>                        |                           |                  |                 |
| Julington Creek                          |                           | 11               |                 |
| County Line - Buckman Brg                |                           |                  |                 |
| Buckman Brg - Fuller Warren Brg          |                           |                  |                 |
| Goodbys Creek                            |                           |                  |                 |
| Ortega River                             |                           | 1                |                 |
| Fuller Warren Brg - Main Street Brg      |                           | 39               |                 |
| Main Street Brg - Hart Brg               |                           |                  |                 |
| Hart Brg - Matthews Brg /Arlington River |                           |                  |                 |
| Matthews Brg - Reddie Pt                 |                           | 2                |                 |
| Trout River                              |                           |                  |                 |
| Reddie Pt - Blount Island                |                           |                  |                 |
| Blount Island - ICW                      |                           |                  |                 |
| ICW North                                |                           | 7                |                 |
| ICW South                                |                           | 6                |                 |
| ICW - Jetties                            |                           | 2                |                 |
| In St. Johns River                       |                           |                  |                 |
| not marked location                      |                           |                  |                 |
| <b>TOTAL</b>                             |                           | <b>68</b>        |                 |

**FDLE 2016.**

In the 2016-2017 year, FWC gave 27 citations for the Duval County area. FWC cited more boats in the downtown area. There were significantly less citations issued than the previous year, with 41 fewer citations issued as compared to 2016.

| <b>FWC 2017</b>                          |                    |           |          |
|--|--------------------|-----------|----------|
| FOCUS AREA                               | # of times in area | Citations | Warnings |
| Julington Creek                          |                    | 1         |          |
| County Line - Buckman Brg                |                    |           |          |
| Buckman Brg - Fuller Warren Brg          |                    | 1         |          |
| Goodbys Creek                            |                    |           |          |
| Ortega River                             |                    | 1         |          |
| Fuller Warren Brg - Main Street Brg      |                    | 11        |          |
| Main Street Brg - Hart Brg               |                    | 5+2       |          |
| Hart Brg - Matthews Brg /Arlington River |                    | 2         |          |
| Matthews Brg - Reddie Pt                 |                    |           |          |
| Trout River                              |                    |           |          |
| Reddie Pt - Blount Island                |                    |           |          |
| Blount Island - ICW                      |                    | 1         |          |
| ICW North                                |                    | 2         |          |
| ICW South                                |                    | 1         |          |
| ICW - Jetties                            |                    |           |          |
| In St. Johns River                       |                    |           |          |
| not marked location                      |                    |           |          |
| <b>TOTAL</b>                             |                    | <b>27</b> |          |

**FDLE 2017.**

From 2015 to 2017, citations issued by FWC decreased from 161 to 27 (-83%).

In the 2017-2018 year, FWC gave 5 citations for the Duval County area. There was significantly less than issued the previous year (22 fewer citations than in 2016).

| <b>FWC 2018</b>                          |                           |                  |                 |
|--|---------------------------|------------------|-----------------|
| <b>FOCUS AREA</b>                        | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> |
| Julington Creek                          |                           |                  |                 |
| County Line - Buckman Brg                |                           |                  |                 |
| Buckman Brg - Fuller Warren Brg          |                           |                  |                 |
| Goodbys Creek                            |                           |                  |                 |
| Ortega River                             |                           | 1                |                 |
| Fuller Warren Brg - Main Street Brg      |                           |                  |                 |
| Main Street Brg - Hart Brg               |                           | 2                |                 |
| Hart Brg - Matthews Brg /Arlington River |                           |                  |                 |
| Matthews Brg - Reddie Pt                 |                           |                  |                 |
| Trout River                              |                           |                  |                 |
| Reddie Pt - Blount Island                |                           |                  |                 |
| Blount Island - ICW                      |                           |                  |                 |
| ICW North                                |                           | 2                |                 |
| ICW South                                |                           |                  |                 |
| ICW - Jetties                            |                           |                  |                 |
| In St. Johns River                       |                           |                  |                 |
| not marked location                      |                           |                  |                 |
| <b>TOTAL</b>                             |                           | <b>5</b>         |                 |

**FDLE 2018.**

C. US Coast Guard

The City of Jacksonville received 2 multi-agency reports from the USCG. The USCG has been willing and active in manatee protection efforts, but the problem is the constant turnover of personnel assigned to Sector Jacksonville. The USCG has been attending the L.E. Task Force meetings.

| <b>FOCUS AREA</b>                         | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> |
|---|---------------------------|------------------|-----------------|
| Julington Creek                           |                           |                  |                 |
| County Line - Buckman Brg                 |                           |                  |                 |
| Buckman Brg - Fuller Warren Brg           |                           |                  |                 |
| Goodbys Creek                             |                           |                  |                 |
| Ortega River                              |                           |                  |                 |
| Fuller Warren Brg - Main Street Brg       | 6                         | 1                |                 |
| Main Street Brg - Hart Brg                |                           |                  |                 |
| Hart Brg - Matthews Brg / Arlington River |                           |                  |                 |
| Matthews Brg - Reddie Pt                  |                           |                  |                 |
| Trout River                               |                           |                  |                 |
| Reddie Pt - Blount Island                 |                           |                  |                 |
| Blount Island - ICW                       |                           |                  |                 |
| ICW North                                 | 13                        |                  |                 |
| ICW South                                 | 10                        |                  |                 |
| ICW - Jetties                             | 14                        | 5                |                 |
| <b>TOTAL</b>                              | <b>43</b>                 | <b>6</b>         |                 |

USCG 2016.

| <b>FOCUS AREA</b>                           | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> |
|---|---------------------------|------------------|-----------------|
| Julington Creek                             | 11                        |                  | 0               |
| County Line - Buckman Brg                   | 20                        |                  | 0               |
| Buckman Brg - Fuller Warren Brg             | 28                        |                  | 0               |
| Goodbys Creek                               | 0                         |                  | 0               |
| Ortega River                                | 12                        |                  | 0               |
| Fuller Warren Brg - Main Street Brg         | 36                        |                  | 3               |
| Main Street Brg - Hart Brg                  | 36                        |                  | 0               |
| Hart Brg - Matthews Brg and Arlington River | 38                        |                  | 0               |
| Matthews Brg - Reddie Pt                    | 50                        |                  | 0               |
| Trout River                                 | 17                        |                  | 0               |
| Reddie Pt - Blount Island                   | 50                        |                  | 0               |
| Blount Island - ICW                         | 77                        |                  | 0               |
| ICW North                                   | 91                        |                  | 10              |
| ICW South                                   | 88                        |                  | 9               |
| ICW - Jetties*                              | 88                        |                  | 19              |
| <b>TOTAL</b>                                | <b>642</b>                |                  | <b>41</b>       |

\*zone still not enforceable due to lack of signage  
USCG 2017.

USCG significantly increased hours of operation in the area from 43 hrs. (2016) to 642 hrs. (2017). There was an increase in the warnings given from 6 (2016) to 41 (2017). The area of the ICW near the Jetties remains unenforceable due to a lack of signage. No report was received for 2018.



**D. Multi agency deployments**

Six multi-agency deployments were held in 2015. A combined 259 hours of law enforcement presence was reported during the 6 deployment weekends. A total of 16 citations and 12 warnings were given.

**Multi agency USCG / JSO 2015**

| <b>FOCUS AREA</b>                         | <b># of times<br/>in area</b> | <b>Citations</b> | <b>Warnings</b> |
|---|-------------------------------|------------------|-----------------|
| Julington Creek                           | 7                             | 4                | 2               |
| County Line - Buckman Brg                 | 12                            |                  |                 |
| Buckman Brg - Fuller Warren Brg           | 23                            |                  |                 |
| Goodbys Creek                             | 6                             |                  |                 |
| Ortega River                              | 6                             |                  |                 |
| Fuller Warren Brg - Main Street Brg       | 24                            |                  | 2               |
| Main Street Brg - Hart Brg                | 36                            |                  | 5               |
| Hart Brg - Matthews Brg / Arlington River | 32                            |                  |                 |
| Matthews Brg - Reddie Pt                  | 47                            | 1                | 1               |
| Trout River                               | 8                             |                  |                 |
| Reddie Pt - Blount Island                 | 14                            |                  |                 |
| Blount Island - ICW                       | 14                            | 1                |                 |
| ICW North                                 | 4                             | 2                |                 |
| ICW South                                 | 16                            | 8                | 1               |
| ICW - Jetties                             | 10                            |                  | 1               |
| <b>TOTAL</b>                              | <b>259</b>                    | <b>16</b>        | <b>12</b>       |

USCG / JSO 2015.

In 2016, six multi-agency deployments were held. A combined 244 hours of law enforcement presence was reported during the 6 deployment weekends. A total of 1 citations and 52 warnings were given.

**Multi agency USCG / JSO 2016**

| <b>FOCUS AREA</b>                        | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> |
|--|---------------------------|------------------|-----------------|
| Julington Creek                          | 3                         | 0                | 1               |
| County Line - Buckman Brg                | 7                         | 0                | 0               |
| Buckman Brg - Fuller Warren Brg          | 16                        | 0                | 0               |
| Goodbys Creek                            | 1                         | 0                | 0               |
| Ortega River                             | 1                         | 0                | 0               |
| Fuller Warren Brg - Main Street Brg      | 27                        | 0                | 8               |
| Main Street Brg - Hart Brg               | 36                        | 0                | 9               |
| Hart Brg - Matthews Brg /Arlington River | 34                        | 0                | 6               |
| Matthews Brg - Reddie Pt                 | 42                        | 1                | 12              |
| Trout River                              | 9                         | 0                | 0               |
| Reddie Pt - Blount Island                | 17                        | 0                | 1               |
| Blount Island - ICW                      | 16                        | 0                | 3               |
| ICW North                                | 12                        | 0                | 5               |
| ICW South                                | 12                        | 0                | 7               |
| ICW - Jetties                            | 11                        | 0                | 0               |
| <b>TOTAL</b>                             | <b>244</b>                | <b>1</b>         | <b>52</b>       |

**USCG / JSO 2016.**

In 2017, five multi-agency deployments were held. A combined 240 hours of law enforcement presence was reported during the 5 deployment weekends. A total of 3 citations and 112 warnings were given.

**Multi agency USCG / JSO 2017**

| <b>FOCUS AREA</b>                        | <b># of times in area</b> | <b>Citations</b> | <b>Warnings</b> |
|--|---------------------------|------------------|-----------------|
| Julington Creek                          | 9                         | 0                | 4               |
| County Line - Buckman Brg                | 10                        | 0                | 0               |
| Buckman Brg - Fuller Warren Brg          | 15                        | 0                | 0               |
| Goodbys Creek                            | 6                         | 0                | 0               |
| Ortega River                             | 2                         | 0                | 2               |
| Fuller Warren Brg - Main Street Brg      | 22                        | 1                | 8               |
| Main Street Brg - Hart Brg               | 33                        | 0                | 66              |
| Hart Brg - Matthews Brg /Arlington River | 34                        | 1                | 5               |
| Matthews Brg - Reddie Pt                 | 54                        | 1                | 12              |
| Trout River                              | 9                         | 0                | 0               |
| Reddie Pt - Blount Island                | 16                        | 0                | 2               |
| Blount Island - ICW                      | 15                        | 0                | 0               |
| ICW North                                | 9                         | 0                | 6               |
| ICW South                                | 8                         | 0                | 4               |
| ICW - Jetties                            | 9                         | 0                | 1               |
| <b>TOTAL</b>                             | <b>240</b>                | <b>3</b>         | <b>112</b>      |

**USCG / JSO 2017.**

From 2015 to 2017, total hours on the water patrolling manatee zones have decreased from 259 to 240 (-7%); citations have decreased from 16 to 3 (-81%); however, warnings issued have increased from 12 to 112 (+89%). There was no report for 2018.

**The following waterway events occurred from October 2017 to September 2018:**

The following waterway events occurred from October 2017 to September 2018:

- October 21 Flounder Pounder Fishing Tournament 100 boats
- October – December Home Jaguar games boating to the game at Metro Marina approx. 100 boats each game
- October 29 Florida Georgia Football Game Metro Marina and Downtown area 150 boats
- December 29 Jacksonville Boat Light Parade Downtown Jacksonville 50 boats
- December 2 Julington Creek Lighted Boat Parade
- December 2 Palm Valley Boat Light Parade
- December 9 Whiteys Fish Camp Lighted Boat Parade
- December 31 Taxslayer Bowl Game Boaters in Marina 70 boats Rafting 50 boats
- December 31 New Years Celebration and fireworks 150 boats
- March 3 El Cheepo Sheepshead Fishing Tournament Mayport Area 400 boats
- April 7 Safe Harbor Boys Home Redfish Roundup Spots Tournament
- March 25 Blessing of the Fleet Downtown Jacksonville 75 boats
- April 13-15 Jacksonville in-water Boat Show Metro Park 50 in water show boats
- June 9 Jacksonville River Rally Power Boat Fun Run Jacksonville to Palatka 50-100 boats
- June 2 P1 Power Boat Races St. Johns and Ortega River area 100 spectator boats
- June 8 Boater Skip Day 500 boats
- June 16 Jacksonville Triathlon #1 swim RAM TO LANDING
- June 23 Kingbuster Kingfish Tournament Jacksonville Beach 125 boats
- June 29 Jalen Ramsey Redfish 2.0 Redfish Tournament 150 anglers
- July 4 Jacksonville Fireworks 200 boats
- July 14 Jacksonville Triathlon #2 swim Ram to Landing
- July 16-21 Greater Jacksonville Kingfish Tournament Jim King Park and Boat Ramp 300 boats
- July 14 Greater Jacksonville Redfish Tournament 200 anglers
- August 4 Jacksonville Triathlon #3 RAM to Landing swim
- September 22 Dragon Boat festival and Races
- September 22 Jumping Fish On The River Swim JU to RAM
- September 29 IFA Redfish Tournament
- August – September Jaguar 2018 pre-season and regular season boating to the game Metro Marina 100 boats each game

## **EDUCATION SUMMARY**

Manatee education for both students and adults continues to be an important objective of Duval County's Manatee Protection Program. Education and outreach includes the development and distribution of the Boating and Angling Guides, community manatee educational talks, participation in community festivals and other events, and transmitting information to the public via the PSA on local T.V. **The stations that have the video for their PSA rotation include WJXT4, Fox30, CBS47, and CW17. The PSA is aired when there is available space/time determined by the T.V. stations.**

### **Florida Fish and Wildlife Commission - Public Outreach**

**A total of 11,071 people were involved in the FWC Community Outreach programs and events. The events ranged from School based education programs to Zoo summer camps and festivals. Specifically, FWC reported 5,683 attendees (not including 1,888 Right Whale Festival and 3,500 Jacksonville Science Festival).**

A total of 12,684 people were involved in the FWC Community Outreach programs and events. The events ranged from School based education programs to Zoo summer camps and festivals. Specifically, FWC reported 1,684 attendees (not including 5,000 Right Whale Festival and 6,000 Jacksonville Science Festival).

### **City of Jacksonville Parks Naturalist - Nature Walks and Talks**

**From October 2017-September 2018, a total of 932 people attended 213 hrs. of walk and talks discussions (n=85) by the Parks Department Naturalist.**

From October 2016-September 2017, a total of 716 people attended 149 hrs. of walk and talks discussions by the Parks Department Naturalist. Furthermore, large events in March (World of Nations at Metro Park with 23,000 people) and August (Outdoor Safety Fair at Avenues Mall with 5,000 people) were not included in the outreach figures for 2017. In 2015/16, a total of 1,151 people attended 76 walk and talks discussions; and in 2014/15, 919 people attended 84 talks. These lectures were held at 11 different parks throughout Jacksonville. This number is less than the previous year (2013/14) when 1,281 attended 74 park naturalist talks at 13 different locations.

### **Jacksonville University - Public Outreach**

**In 2018, 3,389 people (excluding digital media, TV, Radio and Times Union newspaper) attended JU manatee education talks for a variety of schools and community groups compared to 2017/2016 (3,081 and 1,179, respectively).**

In addition, 1,000 people attended the Aqua Jax Festival at MOSH, and Earth Day. About 5,484 people attended the Jacksonville Science Festival (MOSH). Moreover, attendance at the Right Whale Festival was 5000 (Jacksonville Beach); Manatee Festival 3000 (Jacksonville Zoological Gardens); and Science on the St. Johns 385 (Jacksonville University's Marine Science Research Institute).

## Public Service Announcement (PSA)

Clear Channel reported that The Manatee PSA was conducted as a digital PSA program. The message was displayed beginning in April, and through the boating season until September. The PSA was shown at 3 locations each month, and shared time with other not-for-profits. Following is a breakdown of “impressions” aired. Each impression is defined as the number of eight-second “spots”.

| <u>Impressions (# 8 sec. spots)</u> | <u>Value</u>      |
|-------------------------------------|-------------------|
| April: 11,095                       | \$ 475.50         |
| May: 12,833                         | \$ 549.99         |
| June: 7,002                         | \$ 300.09         |
| July: 39,793                        | \$1,705.41        |
| Aug: 8,660                          | \$ 371.14         |
| Sept: 5,234                         | \$ 224.31         |
| <u>Total: 84,617</u>                | <u>\$3,626.44</u> |

## AWARENESS SUMMARY

- Created PSA to be aired spring 2016, **was not aired during 2017, but was aired 84,617 times in 2018.**
- **JSO held Media Day to stress safe boating and to be aware of manatees in the area.**
- **Dr. White does a monthly newspaper column with FTU and has discussed manatees.**
- **Dr. Pinto conducted 3 manatee aerial surveys.**
- **Drs. Pinto, and Ouellette (JU), and Lucas Meers (ZooJax) made a “thescienceof.ju.edu” [YouTube video on manatee bones.](#)**
- **From October 2017 to September 2018, 84 single family dock permits were issued in Duval County as compared to, 64 in (2016/17), 65 (2015/16), 59 (2014/15) and 71 (2013/14) for the same months.**

A total of **three (3)** manatee sighting flights were conducted over the county to determine movement patterns of manatees, this including one State Synoptic Aerial Survey. The information is provided to stake holders including law enforcement (Federal, State and County). Stake holders included the Jacksonville Marine Transportation Exchange Network (JMTX), Jacksonville Port, P1 boat race that typically runs a race in June in the waters south of downtown, and the media (Florida Time Union, First Coast News and Others). In addition, local FWC Marine Mammal Recovery Unit personnel and Sea to Shore Alliance staff are notified about the latest manatee sightings report and map. **In 2017/2018, the number of manatee observations decreased likely due to adverse weather developing in 2017, and its deleterious effects on submerged vegetation habitat. Additionally, there were fewer survey flights than previous years. In 2018, there was a high of 23 animals, and in 2017, 85 manatees (3 surveys/year). This was lower than in 2016 when the Single highest day count was 217 animals per survey (May 2016) – which was the highest count to date, generated media interest worldwide (6 surveys). In 2016, the mean number of manatees in Duval County was 102 manatees per survey, and in 2015 it was 57 manatees per survey. For comparison, there were fewer manatees with a mean of 8 manatees/survey in 2018, and 28 manatees/survey (2017).**

Just like in Lee County, Florida (**Semeyn, et al. 2011**) the manatee count and distribution information in the form of maps is discriminated to local, state and federal law enforcement, maritime industry groups, the port, and the media so that efforts can be focused on raising public awareness through education.

## Table of Educational presentations by JU (2017-18).

| Speaker                         | Date       | Address   | Time        | Organization  | POC  | Number              | Ages   | Topic  |
|---------------------------------|------------|-----------|-------------|---|--|---------------------|--|--|
| <b>2017 OCTOBER</b>             |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 10/4/2017  | Duval     | 8:30        | EPB Symposium   | James Richardson                               | 200                 | Adults   | River Report and manatees  |
| Dr. Pinto                       | 10/4/2017  | Duval     | 14:00       | WJCT  | Jonathan Stacee                                | TV                  | various  | River Report and manatees  |
| Dr. White                       | 10/7/2017  | Duval     | 16:30       | JU  | Quint White                                    | 16                  | Students   | SJR and Manatees   |
| Dr. Pinto                       | 10/16/2017 | Duval     |             | Arbus Magazine  | Brochure Ratings Publication                   | 100,000 readers     | Marinas, Cummer, Art exhibitions etc.                | Manatees, Water quality and St. John River                       |
| Dr. Pinto                       | 10/16/2017 | Duval     |             | TU  | Nate Monroe                                    | 100-150,000 readers | emails about salinity and grass beds                 | Manatees, Water quality and St. John River                       |
| Dr. Pinto                       | 10/27/2017 | Duval     | 10:15-13:00 | RK MSRI (4 talks)   | Emily Floore                                   | 90                  | Duval Charter at Mandarin                            | Manatees, Water quality and St. John River                       |
| <b>2017 NOVEMBER</b>            |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 11/9/2017  | Duval     | 14:00       | WJCT  | Jonathan Stacee                                | TV                  | various  | Manatees and enforcement   |
| Dr. White                       | 11/13/2017 | Duval     | 18:00       | GAB CAC COJ   | James Richardson                               | 60                  | Adults   | SJR, Manatees and OCEARCH at JU                                  |
| Dr. Pinto                       | 11/15/2017 | Duval     | 14:00       | Waterways Commission and attendees  | Lori Boyer                                     | 30                  | Adults   | SJR Report Manatees, Water quality and St. John River            |
| Dr. Pinto                       | 11/27/2017 | St. Johns | 8am         | St. Josephs Academy   | Chris Williams                                 | 20                  | HS   | Manatees, Water quality and St. John River                       |
| Dr. Pinto                       | 11/29/2017 | Duval     | 13:30       | MSC280 Lab Class  | Lucas Meers                                    | 24                  | Adults students                                      | Manatees, Water quality and St. John River                       |
| <b>2017 DECEMBER</b>            |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 12/5/2017  | Duval     | 1800        | Florida Yacht Club  | Tim Monahan                                    | 25                  | Adults   | Manatees, Water quality and St. John River                       |
| Dr. Pinto                       | 12/7/2017  | Duval     | 5pm         | Villa Riva Riverside  | Jim Schwartz                                   | 20                  |  | SJR Report Manatees, Water quality and St. John River            |
| Dr. Pinto                       | 12/13/2017 | Duval     | 9:30am      | Waterways Commission and attendees  | Lori Boyer                                     | 25                  |  | SJR Report Manatees, Water quality and St. John River            |
| <b>2018 JANUARY</b>             |            |           |             |   |  |                     |  |  |
| Dr. Pinto/Dr. White/Dr. Stalker |            |           |             | Meetings with grad students Jane, Josh, Megan, Sam - ongoing_Manatee density, sediment plastics, and isotopic analysis of virbrisse |  |                     |  | SJR- Manatees and Water Quality                                  |
| <b>2018 FEBRUARY</b>            |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 2/8/2018   |           |             | NEFL Synoptic Survey  |  |                     |  |  |
| Dr. Pinto                       | 2/9/2018   | Duval     | 13:00-14:00 | Water Policy Working Group  | River Keeper Org                               |                     | 3 Adults   | Manatees/St. Johns River   |
| Dr. Pinto                       | 2/13/2018  | Duval     | 16:00-17:00 | Interview by phone, threatened and endangered species   | Jacksonville Magazine - Josue Cruz             |                     | 1 Adults   | Manatees/St. Johns River/Other endangered and threatened species |
| Dr. Pinto                       | 2/15/2018  | Duval     | 13:00-14:00 | Water Policy Working Group  | River Keeper Org                               |                     | 8 Adults   | Manatees/St. Johns River   |
| Dr. Pinto/Dr. White             | 2/24/2017  | Duval     | 09:00-15:30 | Manatee Festival Zoo JAX  | ZOO JAX - Liam Major Gate attendance was 7,241 | 200-1000+           | All ages   | Manatees/FWC/River Report  |
| <b>2018 MARCH</b>               |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 3/2/2018   | Duval     | 14:00-16:00 | Turbidity Sampling SJR Dredge   | River Keeper Org                               |                     | 5 Adults   | Manatees/St. Johns River   |
| Dr. Pinto                       | 3/3/2018   | Duval     | 08:30-16:00 | Jacksonville Science Festival - Metro Park  | Nadia Hionides                                 | 175-1000+           | All ages   | Manatees/FWC/River Report/JUMSRI                                 |
| Dr. Pinto                       | 3/9/2018   | Duval     | 10:00-13:00 | The Foundation Academy  | FWC Mike Birns                                 | 30                  | High School plus 3 adults                            | Manatees/FWC/River Report/JUMSRI/Aquaculture                     |
| <b>2018 APRIL</b>               |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 4/6/2018   | Duval     | 10:00-12:00 | Manatee Day Press Conference - Pending  | Law Enforcement Agencies etc.                  | TV                  | All ages   | Metro Park./River/Enforcement stop                               |
| Dr. Pinto                       | 4/9/2018   | Duval     | 09:30-11:00 | Aviation Class 1. International students  | Cliff Miller                                   | 8                   | Adults   | Manatees/St. Johns River/MSRI                                    |
| Dr. Pinto                       | 4/9/2018   | Duval     | 11:30-13:00 | Aviation Class 2. International students  | Cliff Miller                                   | 10                  | Adults   | Manatees/St. Johns River/MSRI                                    |
| Dr. White                       | 4/18/2018  | Duval     | 12:00-13:30 | Epping Forrest Yacht Club Board   | Board Chair                                    | 35                  | Adults   | SJR and Manatees?water Quality Issues                            |
| Dr. Pinto                       | 4/21/2018  | Duval     | 09:00-16:00 | Earth Day _ Pending   | Jacksonville Landing                           | 600                 | All ages   | Manatees/St. Johns River/MSRI                                    |
| Dr. White                       | 4/22/2018  | Duval     | 9am-4pm     | Earth Day Symphony  | David Strickland                               | 350                 | adults   | Become Ocean with commentary about conservation and manatees     |
| <b>2018 MAY</b>                 |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 5/1/2018   | Duval     | 09:00-16:00 | Aqua Jax Festival   | MOSH   | 800                 | All ages (460 adult, 268 youth, 29 other, 44 infant) | manatees/river report/OCEARCH/ju msri                            |
| Dr. Pinto                       |            | Duval     | 11:00-15:00 | Zoo video take  | ZOO  |                     |  |  |
| Dr. Pinto                       |            | Duval     | 9am-4pm     | Flight and Video take   | Aerial   |                     |  |  |
| <b>2018 JUNE</b>                |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 6/4/2018   | Duval     | 11-Oct      | MOSH Talk   | Chloe  | 20                  | Middle Schoolers                                     |  |
| Dr. Pinto                       | 6/1/2018   | Duval     | various     | P1 Boat Race  | Azam and Becky                                 | P1 team/racers      | Adults   | Latest manatee data  |
| Dr. Pinto/Dr. White             | 6/22/2018  | Duval     | various     | Marine Science Camp   | Self, Skeleton, Bones Video                    | 25                  | MS and HS and Adults                                 | Latest manatee data, and Science of video.                       |
| <b>2018 JULY</b>                |            |           |             |   |  |                     |  |  |
| <b>2018 AUGUST</b>              |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 8/10/2018  |           |             | Flight  |  |                     |  |  |
| <b>2018 SEPTEMBER</b>           |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 9/12/2018  | Duval     | 14:00       | Steve Patterson   | Times Union                                    | 100-150,000 readers | Various  | SJR Report, Manatees, Grass beds                                 |
| Dr. Pinto                       | 9/14/2018  | Duval     | 8:30        | EPB Symposium   | James Richardson                               | 200                 | Adults   | Manatees and habitat   |
| Dr. Pinto                       | 9/14/2018  | Duval     | 14:00       | WJCT  | Brendan Rivers                                 | Radio/TV/Blog       | various  | Manatees and habitat   |
| Dr. Pinto                       | 9/27/2018  | Duval     | 14:00       | JU MSS  | Marine Science Seminar Series                  | 25                  | Adults   | Manatees and habitat   |
| <b>2018 OCTOBER</b>             |            |           |             |   |  |                     |  |  |
| Dr. Pinto                       | 10/2/2018  | Duval     | 12:00-13:00 | JU Beta Beta Beta   | Beta Beta Beta - Maya Fisher                   | 15                  | Adults   | Panel discussion, manatee research, St. John River               |
| Dr. Pinto                       | 10/5/2018  | Duval     | 09:00-12:00 | Christ the King visit to JU   | RK-Emily Flore                                 | 80                  | Middle Schoolers                                     | Manatees and St. Johns River                                     |