

Tampa Flight Standards District Office

FY-19 3rd Qtr FSDO Data Analysis and Briefing NPP #35



A Comprehensive Review of Aviation Accidents, Incidents,
Runway Incursions, Pilot Deviations and Airspace
Violations

Past FYs plus 2019FY Data Period

Beginning FY-15 (10/01/2014)

Ending Current Quarter FY-19 (06/31/2019)



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Introduction to the FSDO Quarterly Briefing

The Federal Aviation Act of 1958 was signed into law to help regulate and promote the growth and development of U.S. aviation activities. To this day, the Federal Aviation Administration is commissioned to both monitor and promote aviation safety.

The FAA Safety Team (FAASTeam) was founded in 2006 from an existing Safety Program first established around 1964. The FAASTeam goals are based on an organized business plan developed to assist the FAA in promoting safety by identifying trends to help reduce aviation accidents and incidents.

The FAA Safety Teams' FSDO Report evolved as tool to identify the precursor events that may lead to accidents and incidents. These include monitoring the local activities of events such as unscheduled activity, pilot deviations and runway incursions. The FSDO Report assists in analyzing and targeting information specific to the training needs of the local aviation communities.

1. Objective

This quarterly briefing is intended to keep the FSDO management team informed quarterly and to support the Annual FSDO Aviation Activity report. Its purpose is to identify trends of unwanted events including aircraft accidents and incidents within the boundaries of the TPA Flight Standards District Office. An analysis of collected data is included, as well as proposed strategies to mitigate the identified risk during the next FY. The mitigation plan will allow for targeting event precursors and causal factors, as well as support the efficient use of limited resources within the district.

2. Data Collection

2.1. Data was collected from the following sources:

- 2.1.1 National FAAsteam Accident Incident Data Tool
- 2.1.2 Air Traffic Quality Assurance (ATQA) (FAA Forms 8020-18 and 8020-23)
- 2.1.3 Safety Performance Analysis System (SPAS)
- 2.1.4 NTSB Accident Database
- 2.1.5 FAA Accident Incident Data System (AIDS)

2.2 Data used spans the entire years of Fiscal Year 2015 (10/1/2014) through Current Quarters 3 of Fiscal Year 2019 (6/31/2019).

3. Executive Summary

TPA FSDO FAASteam FY 2019 Statistics-at-a-Glance

The TPA FSDO FAASteam is supported by 7 Lead Safety Representative, 31 Safety Representatives and 22 Service Providers. With 8 proposed Representatives waiting for training and authorization. The expectation for FY 2020 are to increase the number of seminars as allowed by budget, Rep participation, and the weather.

During the 12 Months period the Tampa FAASteam has held over 40 safety seminars throughout our District.

User Statistics:

User Accounts:	15,077
New Accounts:	771 (5.4% Increase since 10/01/2018)
Total Participating	10,927

WINGS Program:

Flight Credits Issued: 317
Seminar Credits Issued: 2,110
Online Credits Issued: 2,661

WINGS Phases Completed: (12 month look back)

Basic Phase: 133 (Highest ever 750)
Advanced Phase: 85 (Highest ever 405)
Master Phase: 65 (Highest ever 287)
Total phased Users 1283

Remedial Training is a utilized Compliance Program tool by the ASIs. In FY 2019, the TPA FSDO recommended Remedial Training to 1 airmen. Airmen is waiting for their courses of Remedial Training.

TPA FSDO Remedial Training is accomplished by authorized instructors and Designees. These providers include FAAS Team Safety Representatives with current CFI and medical certificates or are Designees for this office. In addition to their annual Safety Representative training, they receive specialized 'Remedial Training' training prior to being selected by the FPM as an approved training source.

Remaining FY 2019 Plan of Action and Future of Flight Standards

The TPA FSDO FAAS Team will continue to spend considerable effort in reaching all of the aviators in our district to spread awareness of identified hazards in hopes of mitigating the associated risks.

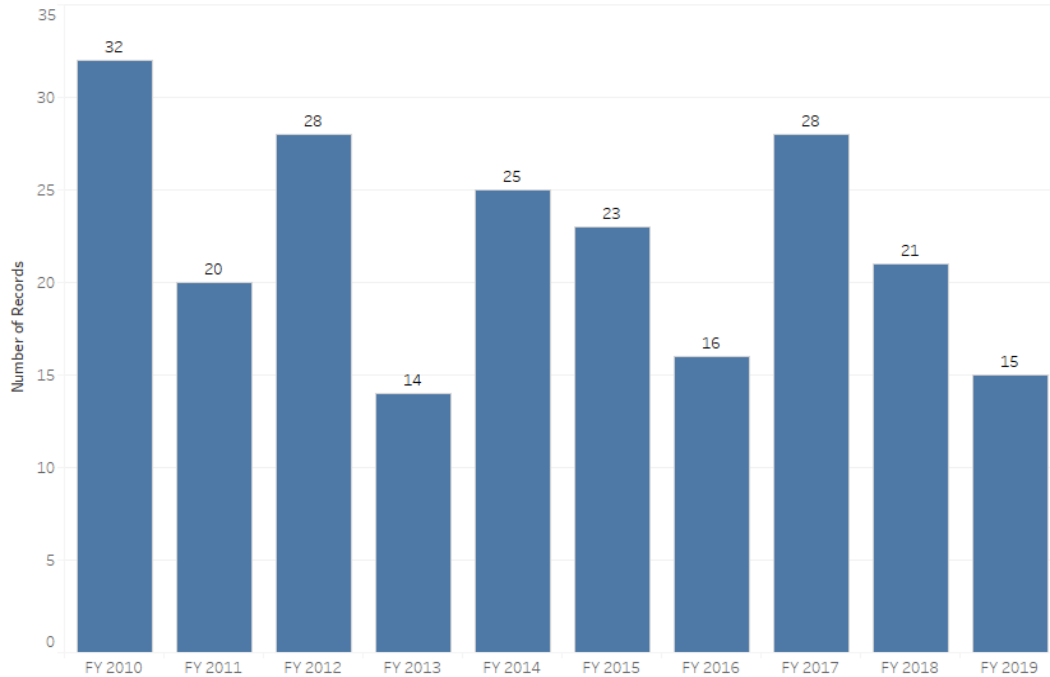
As with Flight Standards, the FAAS Team has been reorganized to fit within the Future of Flight Standards. Nationally, we are grouped under AFS-850. Individual FAAS Team Program Managers will remain attached to their respective FSDOs.

4. Data Analysis

Tampa Accident Activity – FY 2010 thru FY2019 Total Accidents over this 9 year period came to: 222

Count of Accidents

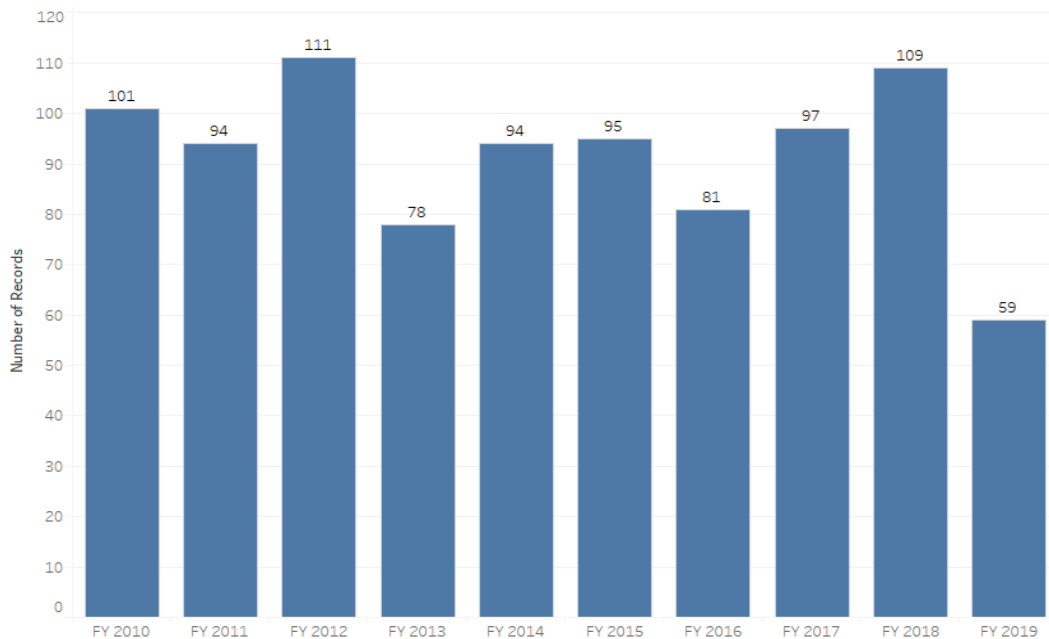
Source: NTSB Accident Database System (eADMS) Updated Through May 28, 2019
Data Tool Refreshed on 6/19/2019 11:03:57 AM



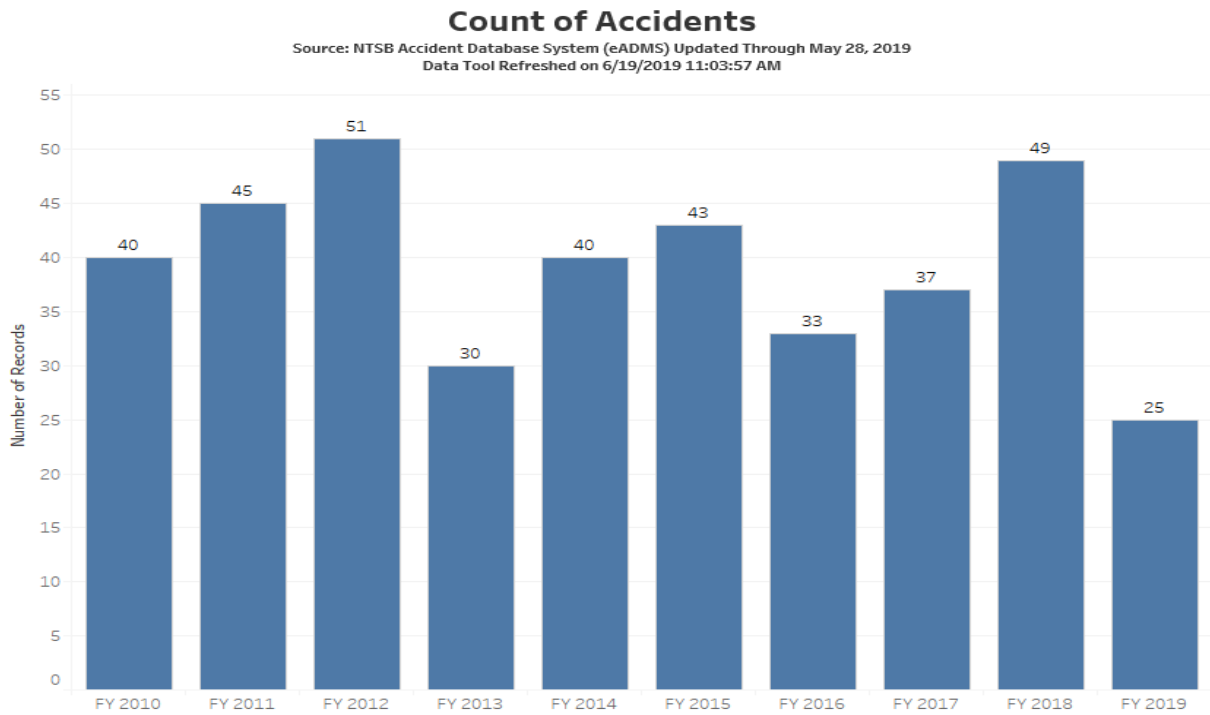
All of Florida Districts Accident Activity - FY2010 thru FY2019 Florida accident total over this same period came to: 919

Count of Accidents

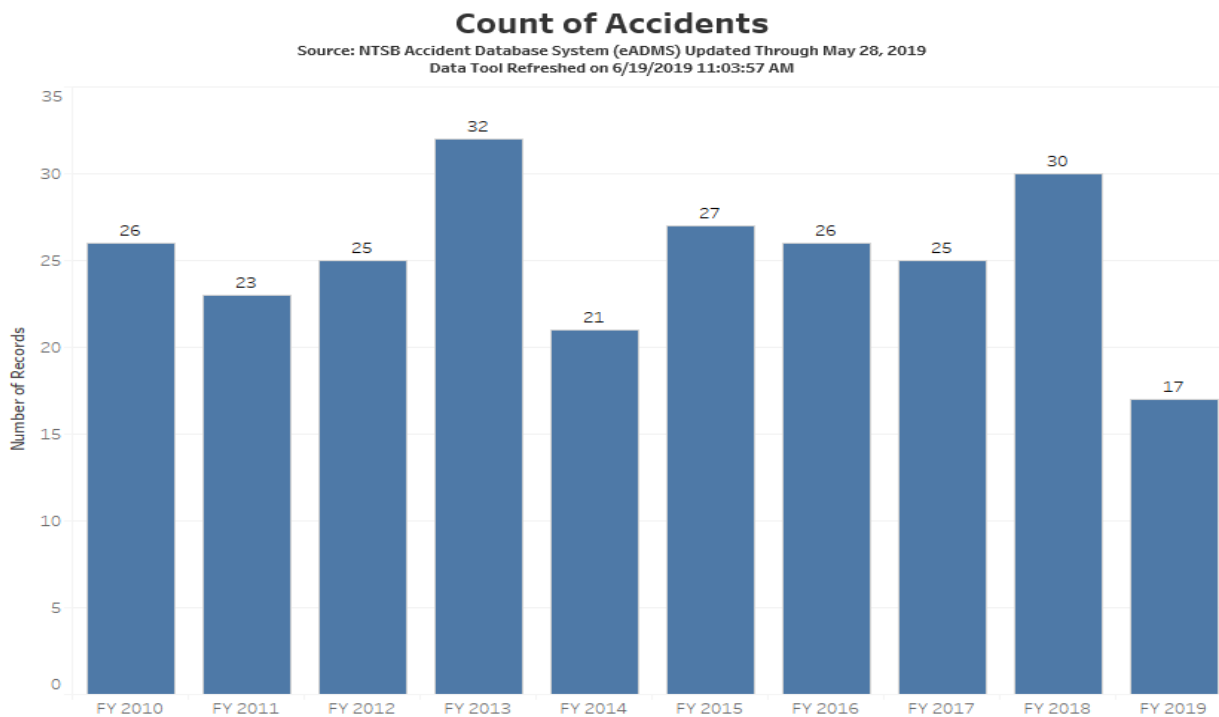
Source: NTSB Accident Database System (eADMS) Updated Through May 28, 2019
Data Tool Refreshed on 6/19/2019 11:03:57 AM



Orlando FSDO Accident Activity: FY2010 thru FY2019
Local accident total over this same period came to: 393



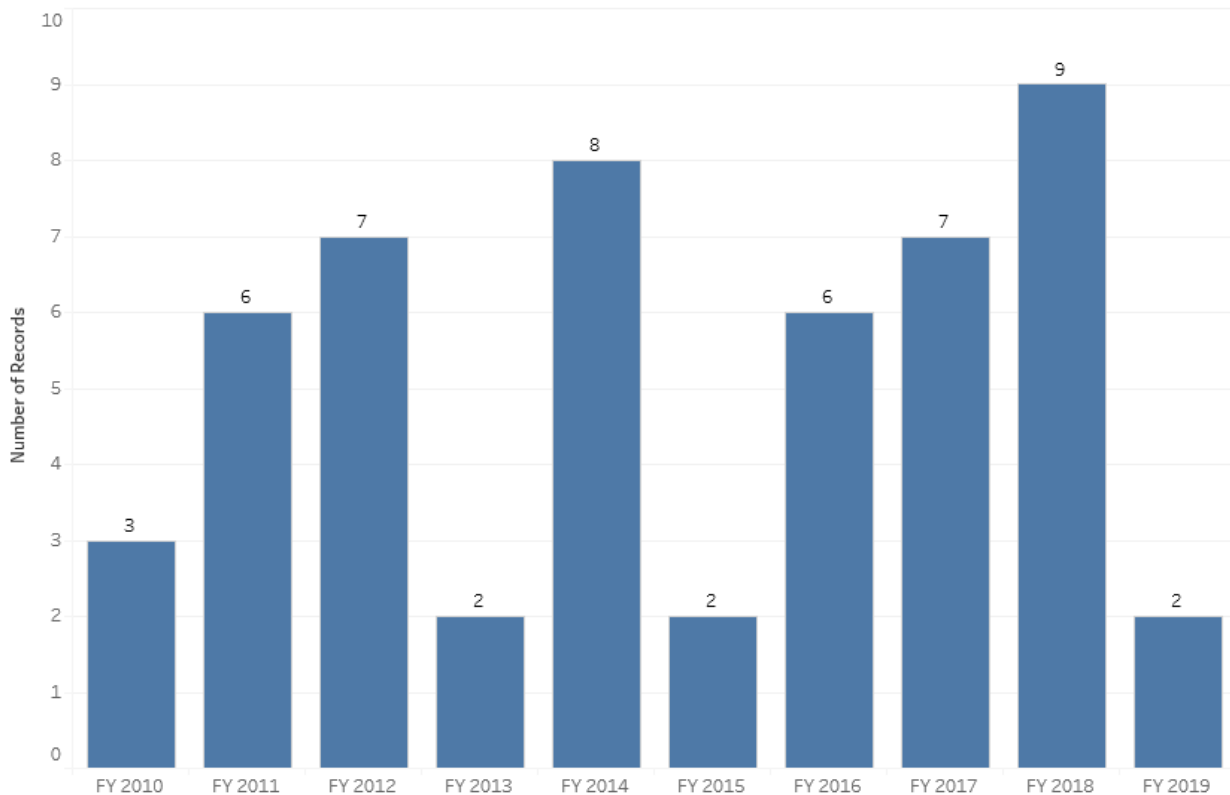
South Florida FSDO Accident Activity: FY2010 thru FY2019
Local accident total over this same period came to: 252



Northwest Florida FSDO (FL only) Accident Activity: FY2010 thru FY2019
Local accident total over this same period came to: 52

Count of Accidents

Source: NTSB Accident Database System (eADMS) Updated Through May 28, 2019
Data Tool Refreshed on 6/19/2019 11:03:57 AM

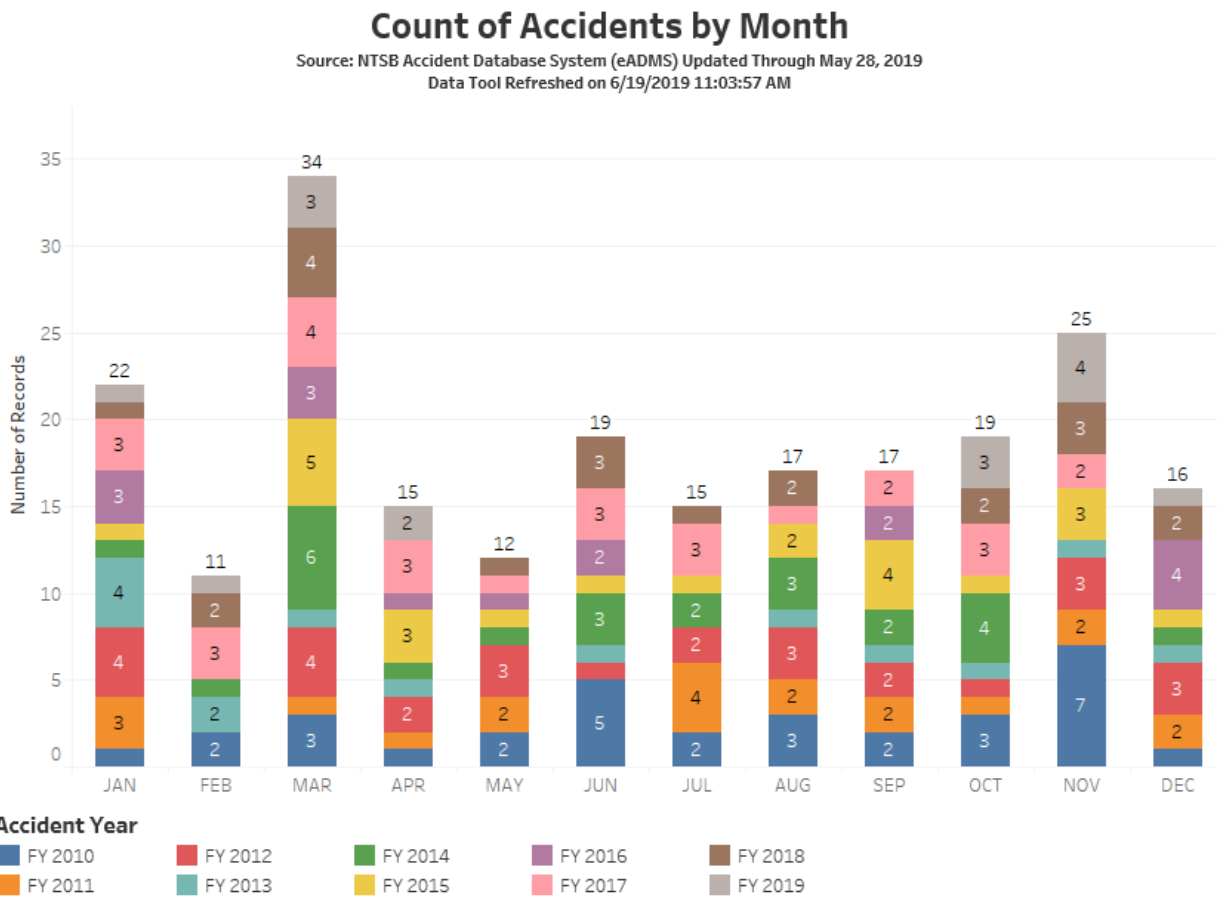


ANALYSIS STATEMENT: The accident trend for Tampa is downward as of the current date; however, for the State of Florida the trend is showing upward. The total fatalities indicates Tampa has declined since FY2017. For FY19 the accidents are mostly Part 91 with one 1 public use event. Since FY2010 the majority of Tampa accidents have been Part 91 operators.

Activity Data Analysis – Analysis of that data will be broken down by the following:

- Activity ACC 1 – Accidents by Month with Detail
- Activity ACC 2 – By FAR Part 91 and Part 137 with detail
- Activity ACC 3 – Phase of Flight
- Activity ACC 4 – Causal Factors
- Activity ACC 5 - Highest Injury Level

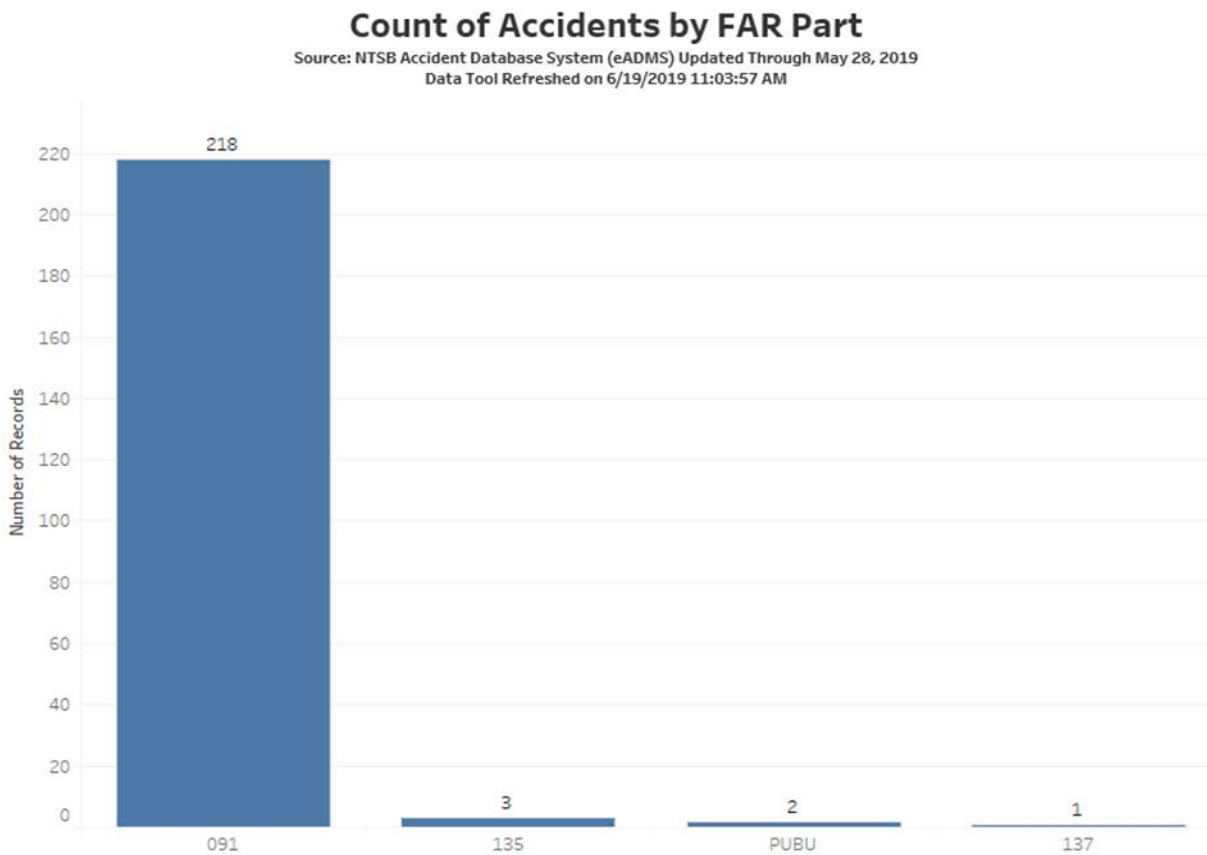
Activity ACC 1: Count of Accidents by Month – A brief look at what time of the year the accidents typically happen with the state.



Data Collection – The accidents reviewed showed the highest accident levels during March and November. Which is consistent with the Snow Bird migrations.

Data Analysis: Per the NTSB Accident Database for this time period: Personnel Issues and Aircraft was the most common causal Level 1 factor. Other levels most notable factors are Task Performance, Aircraft capability and Pilot errors. (see below ACC 4 chart for more details)

Activity ACC 2: Count of Accidents by FAR Part - A Look at the overall accident rate and the FAR Part each was operated.

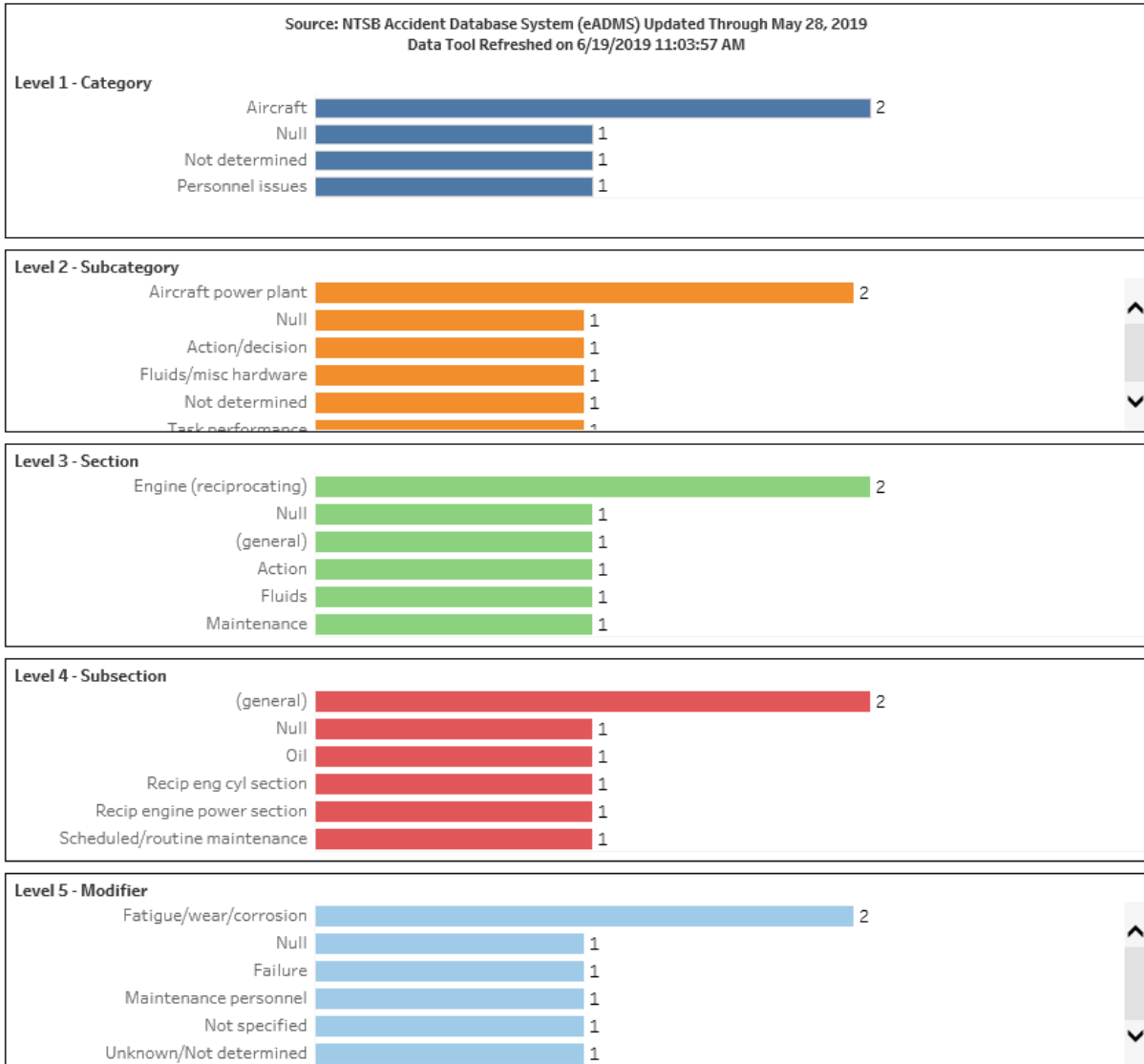


Data Collection – The accidents reviewed by FAR Part shows Part 91 or General Aviation as the highest risk.

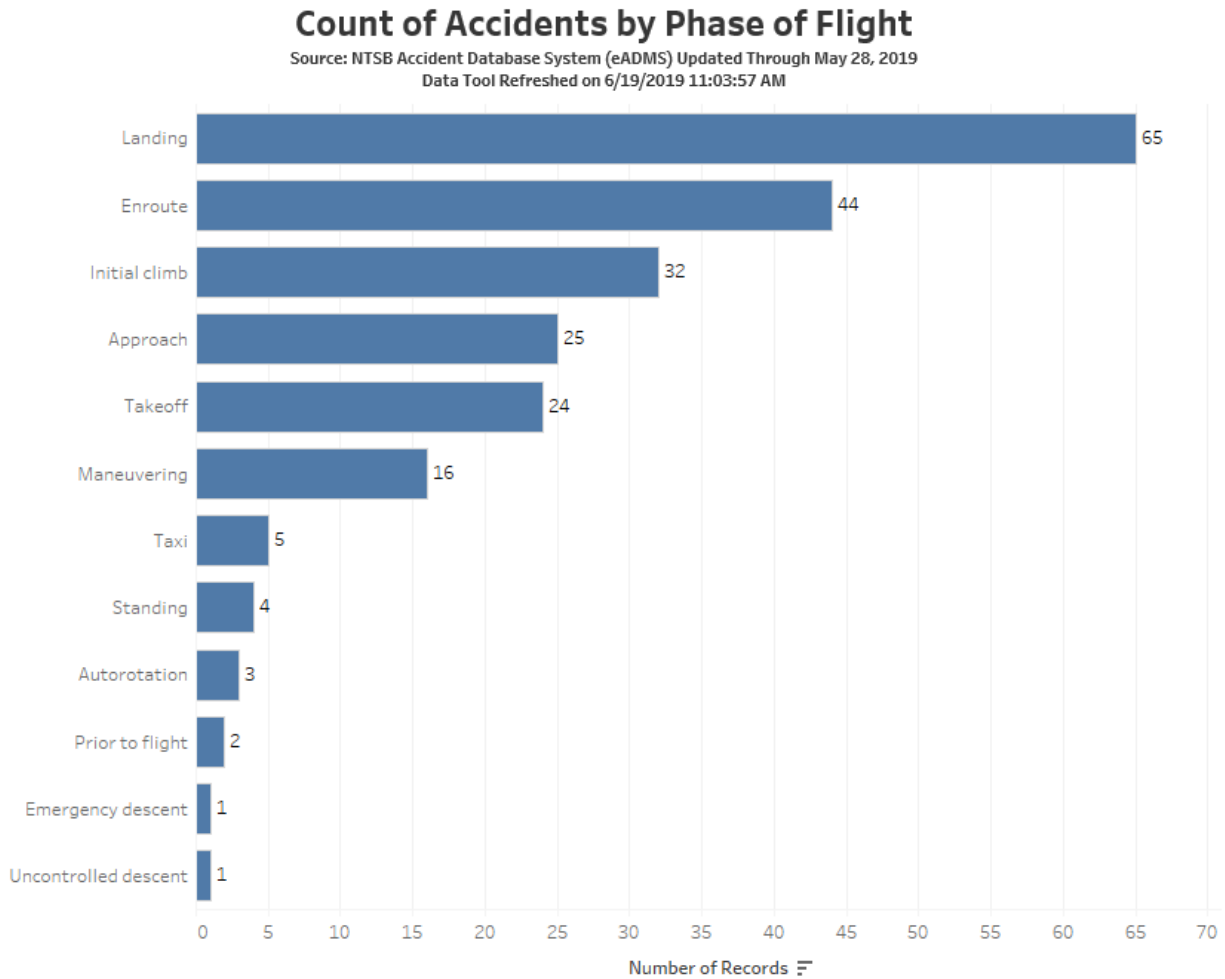
Data Analysis – Accidents for Part 135 showed the following data: **Part 135 causal factors**, appear to be related to the reciprocating engine

Accident Causal Factors

Clicking on any bar in a chart will filter the charts below it --- To remove a filter, click on an empty space in a chart



Activity ACC 3: Count of Accidents by Phase of Flight - This reporting period data showed the top Phases of flight where for all FAR Parts concerned:



Accident Phase of Flight review showed that of the Accidents Reported:

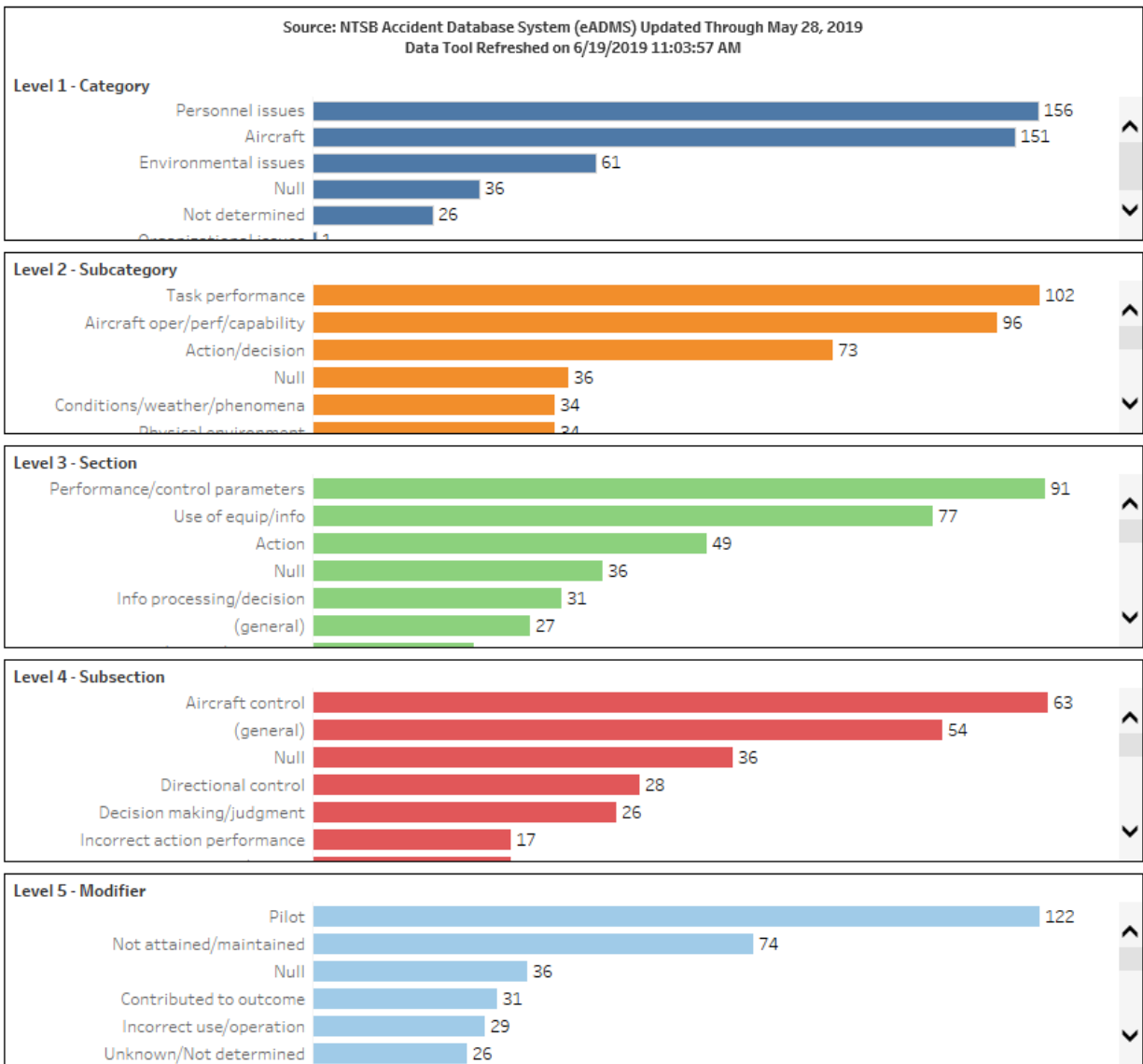
- **Landing – 29%**
- **Enroute – 19%**
- **Initial Climb – 14%**
- **Approach – 11%**
- **Takeoff – 10%**



Activity ACC 4: Accident Causal Factors – Accidents may have more than one causal factor. A review of the reported factors can be found below.

Accident Causal Factors

Clicking on any bar in a chart will filter the charts below it --- To remove a filter, click on an empty space in a chart

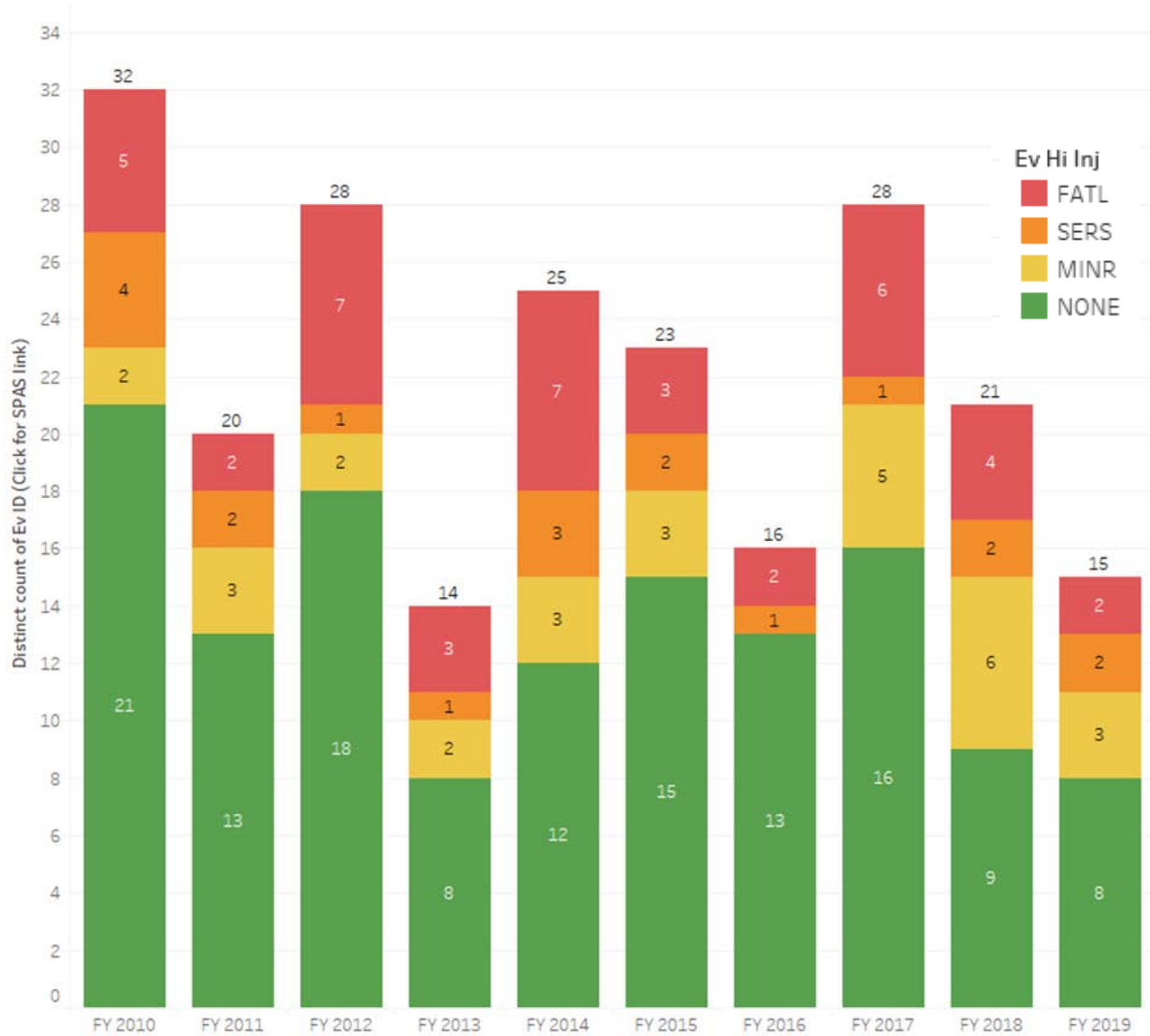


Further research into causal factors showed Personnel Issues & Aircraft as the top Level 1 causal factors. Level 2 Subcategory top factors are Task Performance, Performance Parameters, and Aircraft Control and Pilot errors.

Activity ACC 5: Count of Accidents by Highest Injury Level – Fatality numbers are based on per accident and do not reflect the total numbers of passengers or their injury level.

Count of Accidents by Highest Injury Level

Source: NTSB Accident Database System (eADMS) Updated Through May 28, 2019
Data Tool Refreshed on 6/19/2019 11:03:57 AM

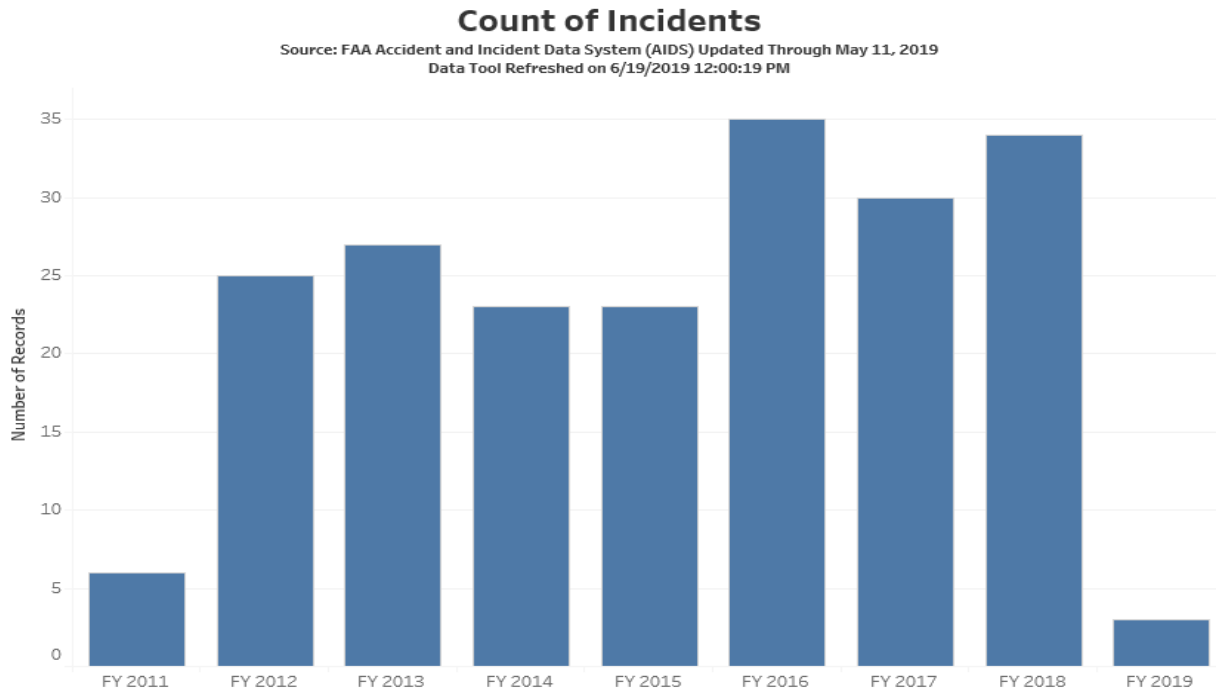


In Summary: Total number of souls lost for the last nine years is 41 in the Tampa District

Activity INC 1: Count of Incidents – Incidents found in the AIDS database area as seen below:

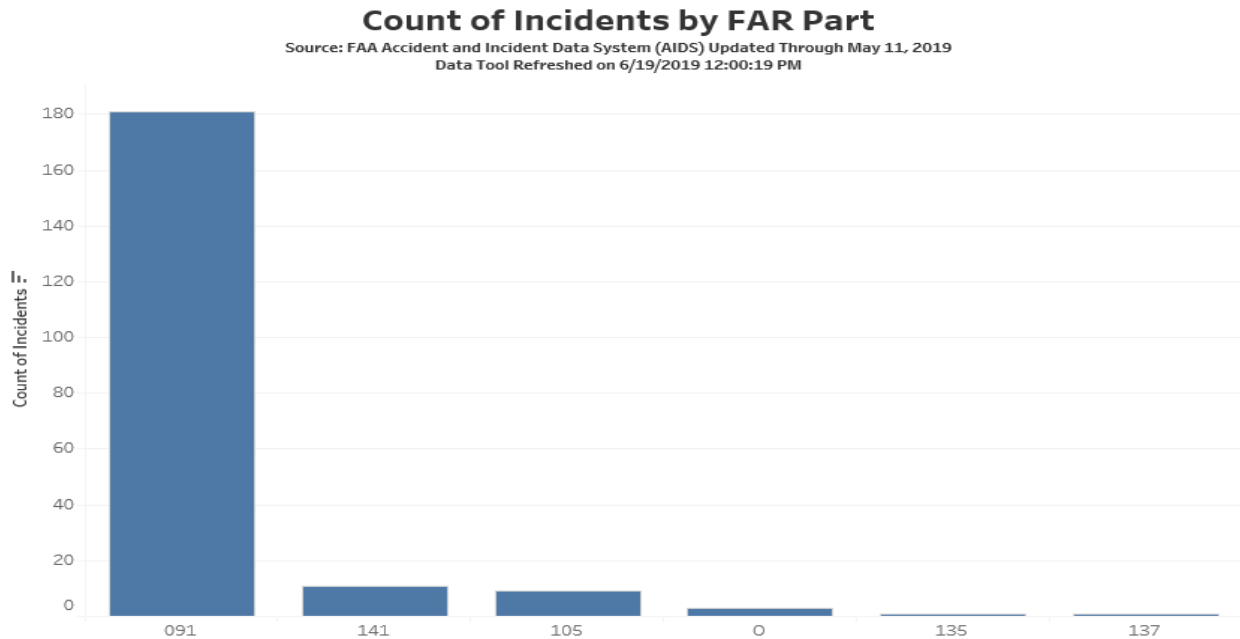
Analysis of that data will be broken down by the following:

- Activity INC 2 – Count of Incidents By FAR Part
- Activity INC 3 – Count of Incidents By Month
- Activity INC 4 – Count of Incidents By Phase of Flight
- Activity INC 5 – Pilot Deviations



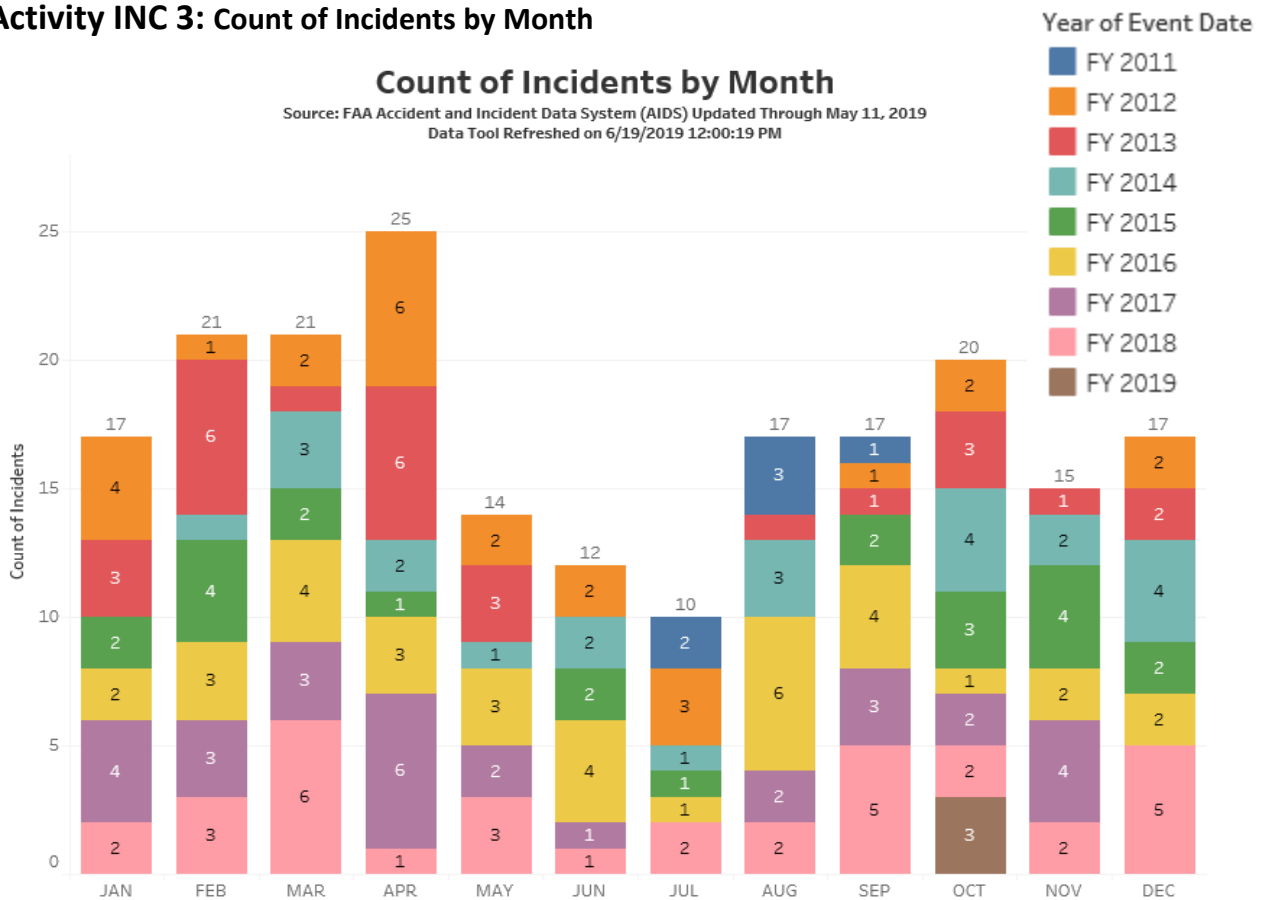
ANALYSIS STATEMENT: The Incident trend has climbed since FY2010 as of the current date; Part 91 is the primary source of these incidents. However, FY2019 is looking to be a good year. (this number may climb as the reports are closed)

Activity INC 2: Count of Incidents by FAR Part - Take a look at the Incidents by FAR Part for the last nine Fiscal Years.



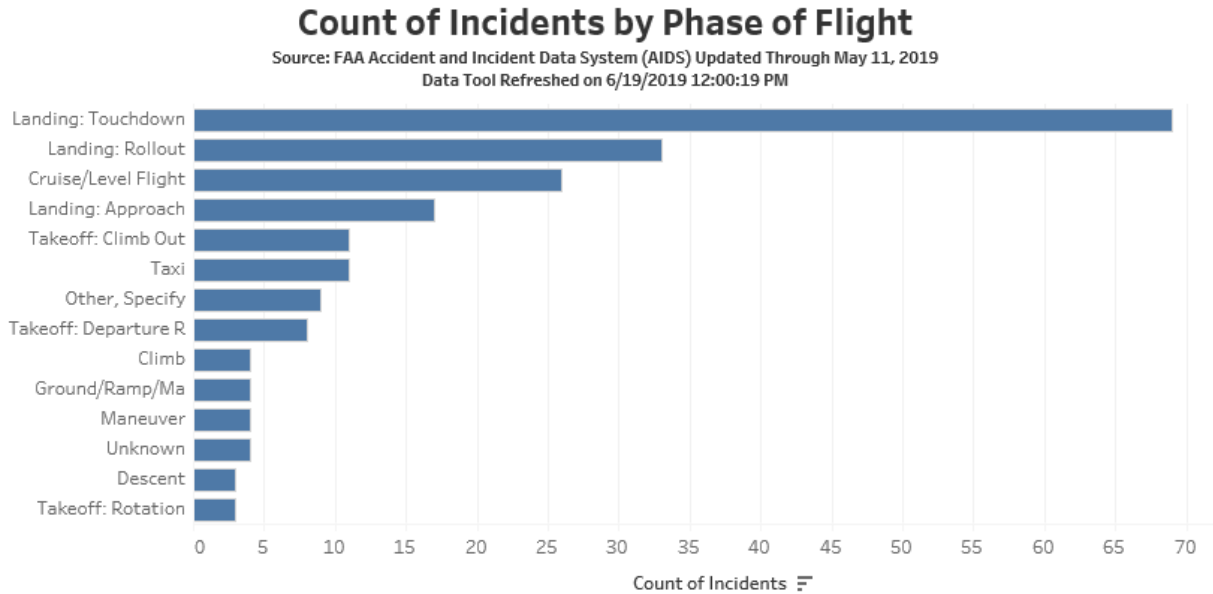
Data Collection: Over the past nine Fiscal Years the majority of the Incidents were during Part 91 Operations. Further review indicates that Part 91 is still the primary Part for Incidents over the past year.

Activity INC 3: Count of Incidents by Month



Data Collection: Of the total Incidents collected this reporting period, details of those events are: it appears the incident count climbs during the snow bird migrations.

Activity INC 4: Count of Incidents by Phase of Flight

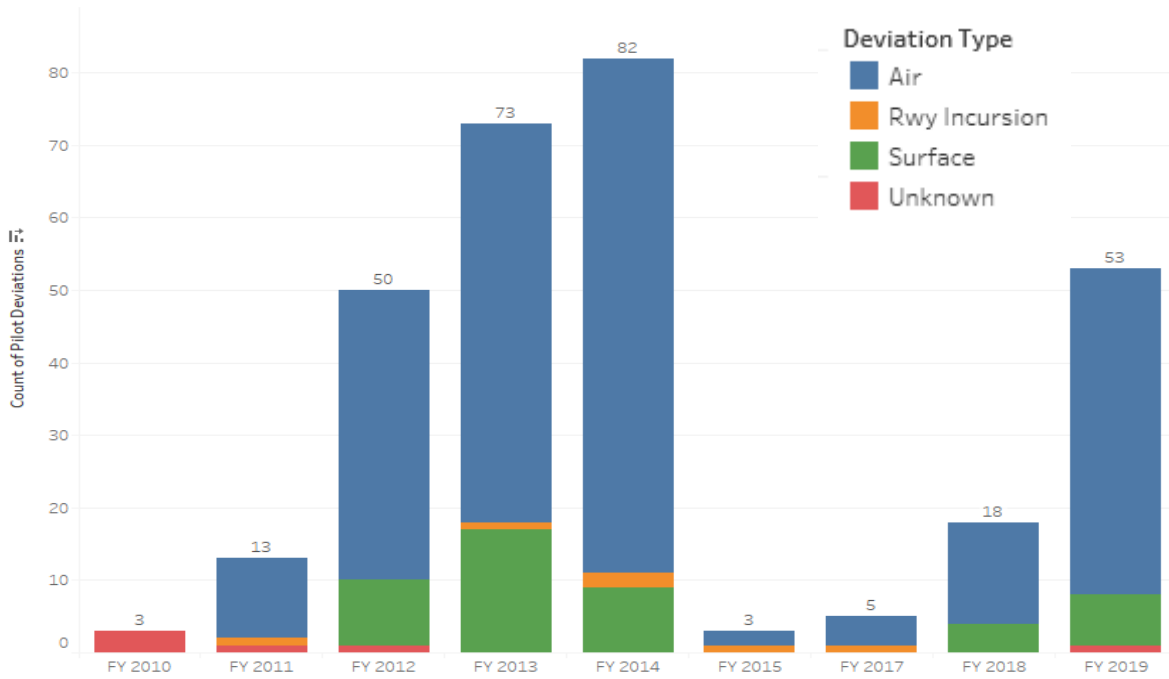


Data Collection: The Primary Phase of Flight at issue: Landing and Touchdown – remains at the top of the list for the total incidents with landing rollout in second.

Activity INC 5: Pilot Deviations

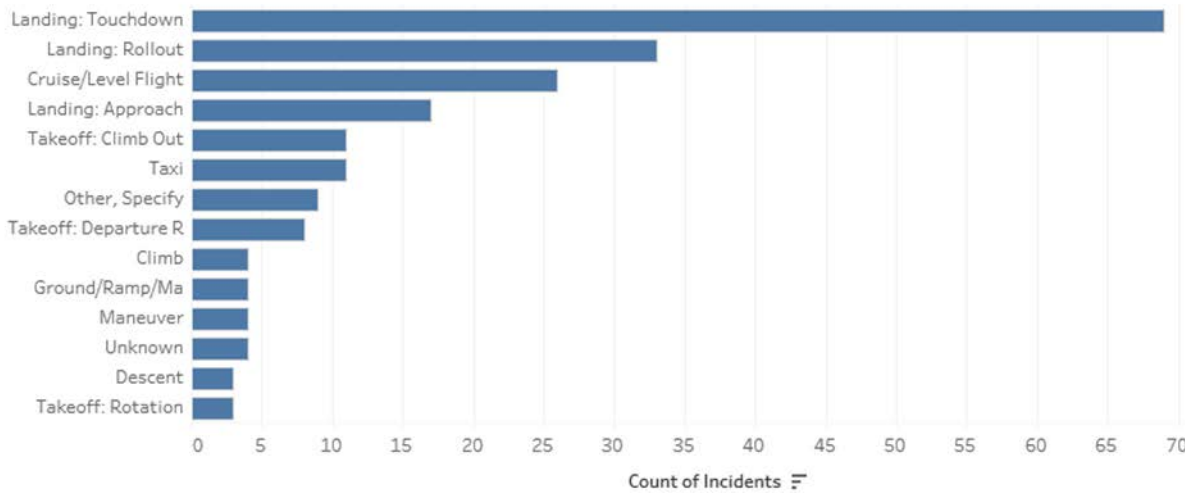
Count of Pilot Deviations

Source: FAA Air Traffic Quality Assurance (ATQA) Updated Through June 14, 2019
Data Tool Refreshed on 6/19/2019 11:06:20 AM



Count of Incidents by Phase of Flight

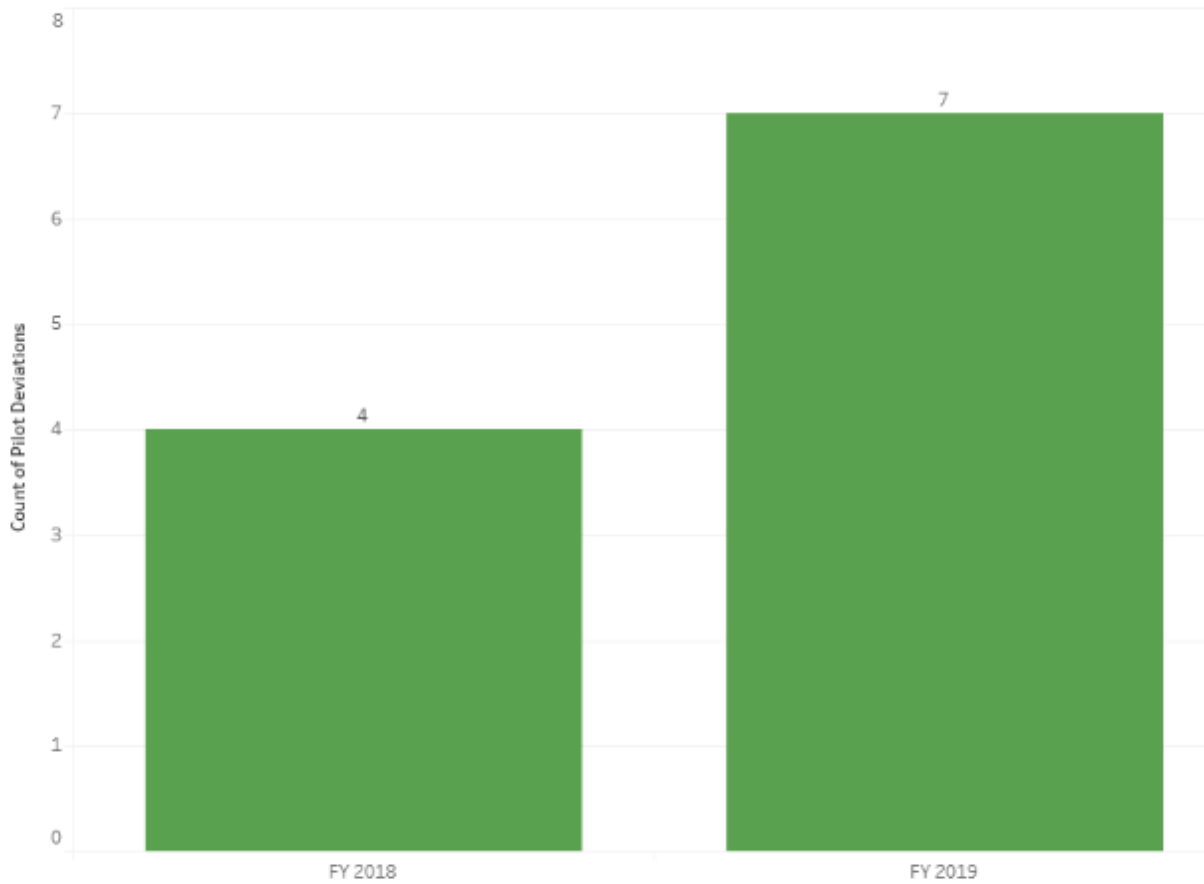
Source: FAA Accident and Incident Data System (AIDS) Updated Through May 11, 2019
Data Tool Refreshed on 6/19/2019 12:00:19 PM



Surface or Runway Incursions by Airport

Count of Pilot Deviations

Source: FAA Air Traffic Quality Assurance (ATQA) Updated Through June 14, 2019
Data Tool Refreshed on 6/19/2019 11:06:20 AM



Event Key	Report Number	Rprt Status	FSDO	State	Arprt	Second of Ev Date	Oprtr Type	A/C Make	A/C Model	No. of A/C Inv..	Deviation Type
1060597844	PSOTBKV18001	FINAL	SO35	FL	BKV	4/2/2018 12:00:..	G/A	CESSNA	C172	1	Surface
1060599978	PSOTSRQ18013	FINAL	SO35	FL		8/14/2018 12:00:..	G/A	HONDA	HA-420	Unkno..	Surface
1060600637	PSOZ03518004	FINAL	SO35	FL		9/18/2018 12:00:..	G/A	CESSNA	206H	Unkno..	Surface
1060601239	PSOTSRQ18014	FINAL	SO35	FL		9/17/2018 12:00:..	G/A	PIPER	PA-28	Unkno..	Surface
1060602078	PSOZ03518009	FINAL	SO35	FL		11/28/2018 12:00:..	G/A	VAN'S	RV-6	Unkno..	Surface
1060602998	PSOZ03518012	FINAL	SO35	FL		11/7/2018 12:00:..	G/A	CESSNA	T240	Unkno..	Surface
1060603508	PSOZ03519001	FINAL	SO35	FL		3/13/2019 12:00:..	G/A	CESSNA	172R	Unkno..	Surface
1060603622	PSOZ03519009	FINAL	SO35	FL		2/25/2019 12:00:..	G/A	MITSUBISHI	MU2	Unkno..	Surface
1060604015	PSOTPIE19004	FINAL	SO35	FL		4/27/2019 12:00:..	G/A	PIPER	PA-28R-2..	Unkno..	Surface
1060604199	PSOZ03519017	FINAL	SO35	FL		5/7/2019 12:00:..	G/A	PIPER	PA-28	Unkno..	Surface
1060604212	PSOTSRQ19007	FINAL	SO35	FL		5/13/2019 12:00:..	G/A	CESSNA	182P	Unkno..	Surface

ANALYSIS STATEMENT: The reported Surface PDs for the last two FYs have incomplete airport codes. These PDs need to be updated to determine which airport in our area is at the highest risk.

Highest Pilot Deviations Included:

- Landing: Touch & Rollout

5. Hazard Identification, Risk Assessment, Mitigation Strategies

5.1 General

The mix of aviation activities in combination with transient flight operations presents the potential for a variety of risks and challenges specific to the TPA FSDO District. The FPM and FSDO Management Team have worked together and analyzed the following appropriate data. We have identified the following hazards, assessed the risks and developed the following mitigation strategies to ensure an acceptable level of safety both for airmen and the general public.

5.1.1 Hazards

5.1.1.1 Hazard Area 1: Landings

Hazard Statement: Based on the data above landings have been the primary phase of flight for reported accidents and incidents in our district. However, when applying a simple root cause analysis methodology, it can be shown that many of those LOC fatal accidents resulted from poor Aeronautical Decision Making (ADM) before and/or during the fatal flight.

5.1.1.2 Risk Assessment:

Likelihood: Frequent

Severity: Major

The result of the above risk assessment is considered unacceptable and requires mitigation.

5.1.1.3 FY2020 Proposed Mitigation Strategies: Targeted Seminars will be conducted in which the targeted audience such as flight schools, flying clubs, pilot and/or Airport Associations, EAA chapters, flight instructors, and DPEs.

Online courses on ADM and Risk Management (RM) via faasafety.gov will be promoted. The safety seminar topics will include ADM, RM and/or Human Factors.

Metrics: Minimum, one presentation with topics of ADM, RM, and/or Human Factors per Quarter

5.1.2.1 Hazard Area 2: Part 135 Reciprocating Engine maintenance

5.1.2.2 Risk Assessment:

Likelihood: remote

Severity: Major

The result of the above risk assessment may seem acceptable, however this a good opportunity to mitigate this.

5.1.2.3 FY2020 Proposed Mitigation Strategies: Targeted Airworthiness Seminars will be conducted in which the targeted audience: such as local mechanics, engine repair stations. Online courses related to this topic using faasafety.gov will be promoted. The safety seminar topics will include human factors and proper post engine runs. Metrics: Minimum, one presentation with reciprocating engine topics per quarter.

Note: Every presentation conducted by the FPM or Representative will include promotion of FAASafety.gov, the WINGS program, the AMT Awards program, and recommend the reporting of component failures through the Malfunction and Defect Reports or the Service Difficulty Report systems.

6. Risk Matrix -

Risk Likelihood		Risk Severity				
		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely Improbable	1	1A	1B	1C	1D	1E