

**COMMUNITY RATING SYSTEM
FLOODPLAIN MANAGEMENT PLAN PROGRESS REPORT
April 24, 2024**

Juno Beach, Florida 120208 NFIP NUMBER

1. Name of the CRS Floodplain Management Plan (LMS or other):

Palm Beach County Local Mitigation Strategy 2020

2. Date adopted:

October 23, 2019

3. Location where copies are available for review:

Juno Beach Town Center
340 Ocean Drive, Juno Beach, FL 33408
<https://discover.pbcgov.org/publicsafety/dem/Sections/Planning-Local-Mitigation-Strategy.aspx>

4. Summarize any floods that occurred during the year (if any):

So far 2024 has experienced stronger wind gusts than normal. No flooding events have been observed.

The summer months of 2023 were hotter than usual with temperatures reaching the high 80s to high 90s. This period also experienced frequent thunderstorms due to the high humidity. Juno Beach did not experience any major storm events or flooding during the hurricane season. The winter months experienced partly cloudy and rainier than normal conditions compared to previous years.

2023 has been a relatively mild year so far with less than a 3-% chance of rain (occurring through January-April).

2022 has been a been a wetter than normal winter.

Hurricane Ian was one of the most powerful hurricanes to ever impact Florida. The storm brought significant rainfall, storm surge, strong winds and tornadoes to the region (September 2022). Rainfall from the storm was significant and there was a rapid rise in canals, lakes, ponds and rivers. The combination of Ian's excessive rainfall, severe winds, and exceptional storm surge contributed to widespread damage and property losses across the state of Florida. Following the landfall of Ian, more than 2.6 million customers were without power.

Tropical Storm Nicole hit Florida very late in the hurricane season (November 2022). The RV Park experienced minor flooding. Nicole was a category 1 hurricane (on the Saffir-Simpson Hurricane Wind Scale) that made landfall in the northwestern Bahamas and on the east-central coast of Florida. It later made landfall as a tropical storm in the Florida Panhandle. Due to its large size, Nicole's impacts extended from the Bahamas and Florida.

2021 was a relatively mild year with no major floods or weather incidents to report. Rainfall reports indicate that we were slightly below average.

With record amounts of rainfall in 2020, there have been several areas in the Town which have been impacted by flooding and ponding water. The Juno Beach RV Park, a location with a history of chronic roadway flooding conditions. The ponding of water is caused by several factors including streets that are within a low-lying area in the RV Park, a limited amount of stormwater runoff storage and no structured drainage system. The RV Park had contracted with a consultant engineering firm years ago and they have made some improvements to their property. While some residents within the RV Park have been inconvenienced by the flooded roadways, the Town has not been advised of any actual property damage caused by the water.

There are several locations along the Ocean Drive corridor which continue to accumulate ponding water during and following heavy rainfalls, most notably in the vicinity of 700 - 800 Ocean Drive. As Ocean Drive is a Palm Beach County maintained roadway, the County is currently performing a survey of the roadway to determine future storm water drainage improvements. There are no reports of any property damage caused by the water.

5. What impact did the floods have on the repetitive loss area:

None of the repetitive loss properties have reported any claims or flood damage. Juno Beach does not have any identified repetitive loss *areas* due to a lack of historical data on the cause of flooding for the three repetitive loss properties on record. The three property owners have been contacted by Town staff regarding the cause of their flood claims, but detailed information has not been provided by the property owners.

6. On a separate sheet (or use the back), list each element of the original plan and note how much was accomplished during the previous year: (this is an on-going list of projects)

- February 2024, The Universe Drainage Project was completed on time and under budget. Construction commenced August 1, 2023, and was completed with the final walk-through January 26, 2024. The Juno Beach Town Council approved

\$3,043,504.50 for the completion of this stormwater infrastructure project. \$1,050,000 was funded by the Resilient Florida grant program and the balance was funded by the Town of Juno Beach. The total cost of this project was \$2,871,942 but with grant funding and some stakeholder reimbursements the Town expended \$1,681,101. This project was built per the engineering design except for the 8' sidewalk which was reduced to the 5' sidewalk due to field conditions and the replacement of one additional manhole and a 7th lateral crossing Universe Blvd to service The Waterford's property.

- April 2023, the Resilient Florida grant was awarded to the Town for the Universe Boulevard Drainage project, in the amount up to \$1 Million. This grant will assist in the complete replacement of 2000 linear feet corrugated metal pipe (CMP) and replace it with high density polyethylene (HOPE) pipe. April 2023, Appropriations in the amount of \$500 k had been approved by the legislative committee.
- April 2022, Town staff are still working with PBC on the proposed drainage project that is part of the paving project on Ocean Dr. The County has agreed to enhance the drainage infrastructure including the swales and installing catch basins and drainage pipes along Ocean Drive south of Donald Ross Road to Pelican Lake. The County has had to make design changes to the project due to conflicts in underground infrastructure and the necessary elevation needed for the new drainage structure. At this time, it is unknown when this project will be completed.
- March 2022, Town staff were notified of an estimated (up to) \$1,050,000 mitigation grant awarded to the Town for the Universe Blvd Stormwater project. This project has sought funding for 5+ years, now that we have 50% of the project it will continue to move forward. This project has been engineered, the permits have been applied for and construction drawings are expected summer 2022 with project bidding to take place immediately. Construction is expected in 2023.
- April 2021, Town staff have been working with Palm Beach County staff to enhance drainage on Ocean Drive where we have seen chronic ponding of stormwater. PBC is proposing a drainage project to not only enhance drainage in these problem areas but to improve the water quality of the stormwater as it funnels into Pelican Lake and is subsequently released into Little Lake Worth Lagoon south of Town. The discussions and proposals include a new 24-30" drainage pipe, swales, pollution prevention baffles, swales with raised inlets, exfiltration trenches and a possible littoral shelf. These items are being discussed by the Town's engineer and county representatives. It is hopeful that this project will be designed this summer and constructed next year in 2022.
- December 2020, Palm Beach County commenced the beach re-nourishment project which includes Jupiter & Juno Beach. Town staff has worked diligently with the county to accomplish this task.
- In October 2020, 3 ordinances were passed (No 728/ No 729/ No 730) to rezone parcels that are in the SFHA from Residential Single-Family and Commercial General to Environmental Sensitive Lands (ESL). This action taken by the Town Council supports the Town's mitigation efforts as outlined in the "Action Plan"

(Section 9 of the Floodplain Mitigation Plan). Below is a map of the three properties.



- Summer 2020- The stormwater management plan from 2009, as prepared by AECOM (the Town’s engineer at the time) identified capital improvement projects for stormwater management. One of the recommended projects was one on Zenith Lane. This area was selected as a location for drainage improvements because of the slope at the end south of S. Juno Lane and other areas which are relatively flat in grade. It is recommended that drainage structures and exfiltration trench be installed at select locations to better facilitate drainage. The Public Works Director is currently coordinating with the Town’s engineer (Simmons & White) as they provide an engineering design to mitigate the ponding that takes place in this part of Town. This project is due to complete in 1Q/2021.
- In August 2018 the town applied for a HMGP (Hazard Mitigation Grant Program) grant for Universe Blvd. The Town also worked with our state representative (Rick Roth) in asking for appropriations funds (January 2019) for this storm water mitigation project. The Town had two letters of support for these funding requests, one from Florida Power & Light headquarters and one from the Waterford which is an assisted living facility that would be directly impacted from a storm water pipe failure. The Town continues to monitor Palm Beach County’s Local Mitigation Strategy Project Priority List (LMS-PPL) which lists two flood mitigation projects. The Town continues to work closely with the county and the state in the up-coming beach renourishment tentatively scheduled for FY20/21. (2019)
 - In addition to applying for 2 grants for the Universe Blvd storm water project, staff requested funding from the state through an “Appropriations Request” soliciting and receiving the support of our State Senator and State Representative. As of April 2018 we have not received notice whether this appropriations request was granted or not. (2018)

- Public Works has made repairs to the Zenith Lane drainage structure, and they removed silt/debris from the drainage pipe. (2017)
- 2017; The drainage system which services the properties on Universe Boulevard conveys storm water runoff through a 40-year-old corrugated metal pipe which outfalls into the Intracoastal Waterway. There are approximately 5,000 feet of large diameter pipe, catch basins, lateral connections, and manholes in this system. This system is failing, to date \$157,285 has been spent on this system and has resulted in the repair of only 124 feet of the 5,000-foot system. Certain that this infrastructure will continue to require repair and/or replacement, and due to the fact that emergency repairs escalate the cost of such improvements, town staff sought grant funding opportunities to reduce the costs for all the stake holders. The Juno Beach Town Council agreed with the initiative and Town staff is in the process of reviewing three current grant opportunities from various State and Local agencies. Grant awards are not expected to be announced until late summer to early fall of 2017, and construction of Phase 1 is not expected until 2018.
- 2017; Palm Beach County is scheduled to renourish the beaches in Jupiter and Juno Beach in 2018. We have been assisting them and coordinating with them as this project unfolds. (Note: this project was delayed and now tentatively scheduled for 2020)
- In 2015, Juno Beach submitted an application to the Palm Beach County Local Mitigation Strategy (LMS) for consideration of their Prioritized Project List (PPL). Our drainage project located at Juno Ocean Walk, was reviewed, and ranked #6 (out of 69 countywide projects) and placed on the LMS PPL in December 2015. This was part of Goal #2, objective 2.2 in our floodplain mitigation plan as we work towards this mitigation project. This mitigation activity is part of our Action Plan as we pursue grant funding for this drainage project.
- The Town staff has implemented and/or continued with the following flood mitigation activities according to our Flood Mitigation Plan:
 - We continue to look for funding opportunities for the two unfunded capital improvement projects on Zenith Lane & Juno Ocean Walk. Our staff is working to get the Juno Ocean Walk drainage project on the LMS approved project list.
 - This year has been instrumental in promoting flood insurance since almost 1,000 property owners will be impacted by the new FEMA flood maps. Staff has sent letters to all these property owners in addition to speaking to them on the phone and in person educating them about how this will impact their flood insurance coverage.
 - Our staff has contacted FDOT about the flooding/drainage concerns on US Hwy 1 when we have a heavy downpour. We are monitoring this area.
- The Town has been working to provide needed maintenance to the Universe Boulevard storm water drainage system. The storm water drainage system servicing the properties along Universe Boulevard

consists of a series of inlets and underground pipes beneath that roadway. The storm water collected in the system flows through 35 year old corrugated metal pipe which varies in size from 18" to 60" in diameter. The flow is conveyed along Ellison Wilson Road and discharges to the Intracoastal Waterway. There are approximately 5,000 feet of pipe in this system. In early 2013 a company was contracted to inspect, determine infrastructure integrity and provide repairs. As a fair and equitable means to have abutters maintain the infrastructure into which they discharge, the Juno Beach Town Council agreed that Universe Boulevard abutters (stake holders) should share the costs for improvements to that drainage system. Once the pipe was inspected it was then jet cleaned along with all 6 lateral connections. Once cleaned, cameras were used to look for damage, potential backup locations and root infiltration. The pipe was tested by systematically plugging sections and pumping water into these areas. The outcome of this testing resulted in minor repair work to two open joints on two of the intake structures. The overall condition of this storm water drainage pipe was determined to be in good working condition and no further work is required. This project was completed in January 2014.

- Staff started working on our Floodplain Management & Mitigation Plan in January 2013. A task force was assembled including residents of the community, business owners and other stake holders. Over the course of a year, we formulated and developed a comprehensive plan with goals and objectives specifically for Juno Beach. The completed plan is due to be completed in early summer 2014.
- The Juno Beach Town council approved staff's request to apply for a Flood Mitigation Assistance (FMA) grant to fund a new Floodplain Management Plan in 4Q/2011. The Town staff submitted the FMA application to the State of Florida and we were awarded the funding, and the grant agreement was executed August 8, 2012. This Floodplain Management Plan will support the Palm Beach County Local Mitigation Strategy (LMS) that the Town currently uses. The new plan is being customized for the Town and will identify flood hazards and specific flood projects to better protect residents and insurable property from the hazard of flooding.
- On March 23, 2011 the Juno Beach Town Council voted to move forward with one of the recommended storm water management projects as suggested by the Town's engineer. The project will replace the Pelican Lake outfall pipe that is in desperate need of repair. This project is approved for funding and was completed in May, 2011.
- On July 22, 2009, the Town's engineering firm submitted a town-wide storm water management plan that addressed three specific projects. In addition to the projects our engineer made a recommendation to restore some of the sections of swale on Ocean Drive. Some of the swales in town have not been maintained due to tree plantings and steep slopes from adjacent yards. The Town has restored a number of these recommended swale sections which increases surface storage and reduces temporary

ponding in the roadway allowing for better percolation to occur. One of the three recommended drainage projects is in the floodplain. This project calls for the replacement of the Pelican Lake outfall pipe due to its deteriorated condition. This project was scheduled for 3Q-4Q/2010 with funding from the Town's Capital Improvement Budget 09/10 due to budget constraints this project was delayed.

- Beach re-nourishment was supposed to take place in November 2009 through out Juno Beach. This project was delayed due to permitting issues which have been resolved. Construction bids for this work went out in March 2009. Beach re-nourishment commenced December 2009 and was completed April 2010. This project added approximately one million cubic yards of new sand onto approximately 2.4 miles of eroded beach and dunes within the Towns of Juno Beach and Jupiter. The re-nourishment project also included the installation of over 50,000 sea oat plants to assist in preventing further erosion of the beach and dune.
- Because the Town's coastline is particularly susceptible to serious beach erosion, it maintains an aggressive beach restoration and re-nourishment program. This program is monitored by the county through the Town.
- The Town has an impressive class 5 rating (one of the highest in the County), which provides residents with a 25% reduction on their flood insurance premiums. Residents receive newsletters containing hurricane, flooding and other disaster preparedness information. The Town hosts resident meetings as part of its CRS program.
- In 2006, the Town upgraded the emergency generator to include the administrative offices as well as the Police Department. The Town has also received approval from FEMA to continue to harden the municipal complex and complete the installation of storm shutters and impact glass. The hardening of the Town center and police department was completed August 1, 2008.
- In 2004, the Town amended their local codes to bring them current with the change to the Unified Florida Building Code. The municipal complex is fitted with storm shutters and impact glass, has an emergency generator and utilizes a reverse 9-1-1 emergency alert system.

7. Were any of the objectives not reached or is implementation behind schedule? If so, state why:

The Juno Ocean Walk Drainage Project is on the Fall 2023 Prioritized Project List (adopted by the LMS Steering Committee). At this time, lack of grant funding has prevented the project at Juno Ocean Walk RV Park from being completed.

8. Should new projects be started or should any of the recommendations or objectives be revised:

Palm Beach County is repaving Ocean Drive from US1 to Donald Ross Road. This project will also provide enhanced drainage on Ocean Drive starting at the Juno Beach Town Center to just south of 751 Ocean Drive. The drainage features include new

drainage pipes, catch basins and enhancing the existing swales. The County has also agreed to install two littoral shelves, on the north and south end of Pelican Lake to enhance the water quality. This is a Palm Beach County project, but the Town will fund the construction of one of the littoral shelves. This project should be advertised for a competitive bid in February or March.

The Town of Juno Beach was awarded funding from the Resilient Florida grant program to improve drainage on Celestial Way. This 50/50 match grant will provide \$162,000 towards this capital project. The majority of this capital improvement project will create swales on both the east & west side of Celestial Way. The engineering design proposes pervious pavers at the intersection of Mercury Road and Celestial Way to further enhance the management of stormwater. This project will be put out for competitive bid in March and construction will begin prior to July 1st per the grant guidelines.

9. Progress Report discussed and/or made available at a public meeting (attach copy of the minutes as documentation)

The progress report was presented to the Town Council at the April 24, 2024, meeting and copies of this report were made available to the public and the media.

For more information contact: Isabella Hickey, Senior Planner.

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