



# City of Sanibel

## Flood Warning and Response Plan

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City of Sanibel – Flood Warning and Response Plan

The entire island of the City of Sanibel is considered a special flood hazard area by the Federal Emergency Management Agency (FEMA). All property on Sanibel is in a floodplain, and is at risk of flooding. Flood events tend to pose a variety of hazards to a community as they build, crest and subside. At different points in the life of flood, people are displaced, damage occurs and finally a cleanup is initiated by governmental agencies responsible for floodplain management. Disruption of normal public utilities and the presence of flood debris and damage can produce safety and health hazards. A comprehensive **Flood Warning and Response Plan (FWRP)** is one of the several tools available to local governments to coordinate and guide an effective response to a flood event. The City of Sanibel **FWRP** was developed to assist the community in dealing with local flood hazards as well as to reduce the risk of first responders by defining the how’s, what’s, when’s, and where’s of the operation. The City of Sanibel FWRP was prepared with the input of the Sanibel Public Works Department, Sanibel Police Department, Sanibel Building Department, and the Office of the City Manager.

The FWRP shall be reviewed on a yearly basis and shall be updated as new information and technologies are made available.

Adopted on:	
Latest review/revision:	

**Goal**

The goal of the City’s **Flood Warning and Response Plan** is to provide flooding information for the safety of residents, visitors, and business owners in the event adverse weather conditions create a flooding hazard.

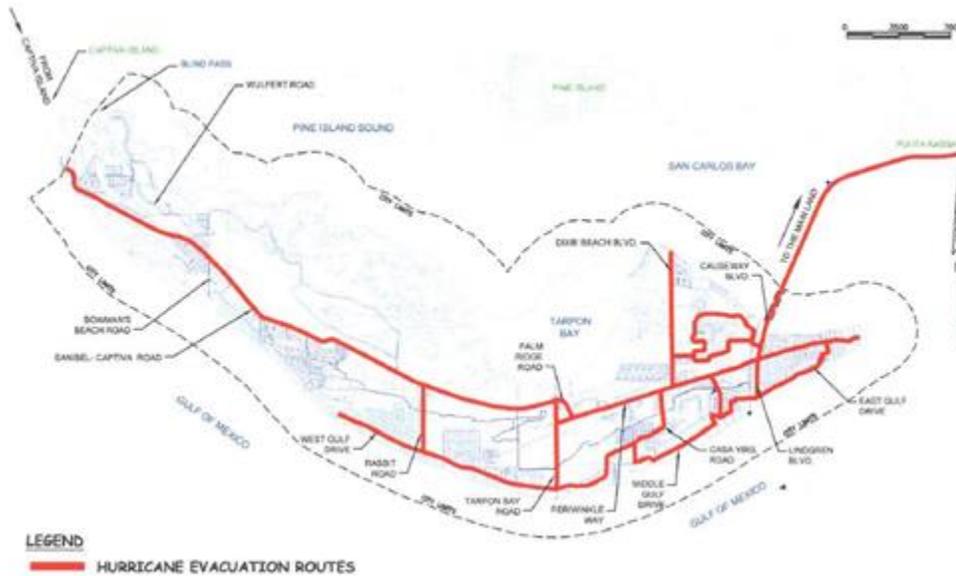
**Purpose**

The purpose of the **Flood Warning and Response Plan** is to provide information for early flood recognition and warning dissemination, establish response and emergency response actions, establish post-flood recovery actions, and develop community awareness. Through the implementation of the FWRP the City’s main goal of minimizing public and private property losses, while protecting the public safety in an efficient and cost-effective manner is achieved. The FWRP does not prevent flood disasters, but enables public response actions to be timely and workable.

**Planning and Coordination Factors**

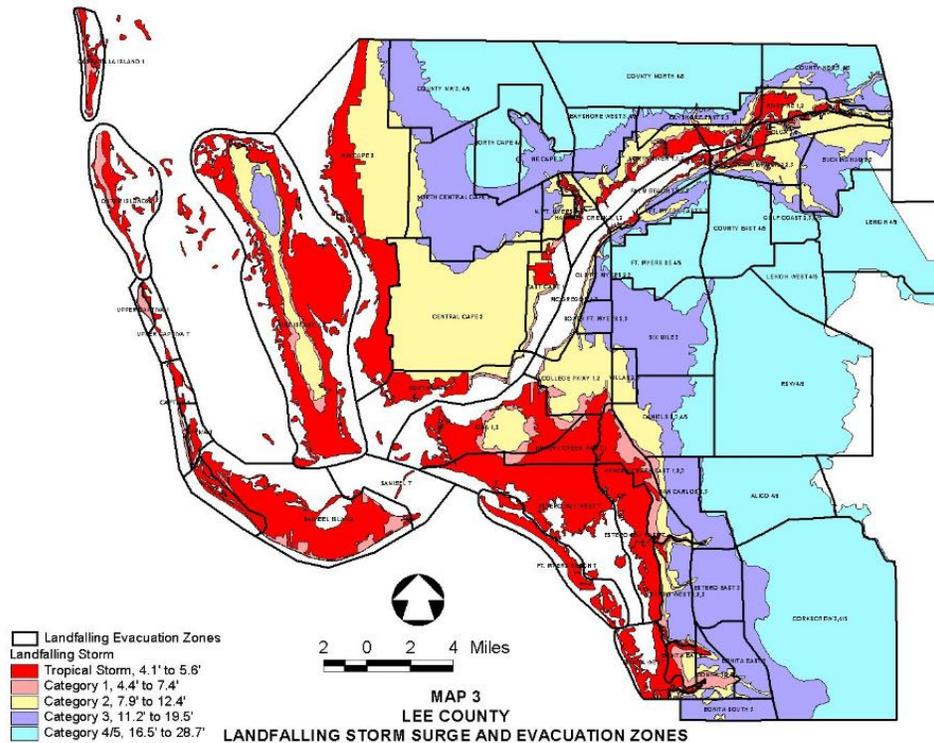
Serious flooding can occur as a result of heavy rains, tropical storms, and hurricanes. For this reason the City of Sanibel is ready to act on a 24-hour basis through the inter-agency cooperation of Lee County Emergency Management Division, City of Sanibel Fire Control District, Sanibel Public Works Department, Sanibel Police Department, Sanibel Building Department. The City of Sanibel uses contractual services of an independent weather consultant, Dave Roberts. City, County, and private resources,

separately or in combination, may be required to handle an emergency situation. A response to a major flooding event may require a high degree of interagency cooperation and communication. Sanibel has posted all primary evacuation routes with blue and white signs. Evacuation time for Sanibel could be as long as 18 hours.



The Federal Emergency Management Agency (FEMA) flood insurance rate maps (FIRMs) have been used to identify flood prone areas within the City. These maps delineate 100-year flood plains and boundaries. FIRMs are available through FEMA's website [www.msc.fema.gov](http://www.msc.fema.gov) or the City's Building Department. The Hazard Areas and Elevations are shown below. To determine the flood depth of the 100-year event, subtract the ground elevation from the Base Flood Elevation.





### Analysis (Stormwater Management)

The City of Sanibel is a barrier island located entirely in the Gulf of Mexico. It has no natural connection to the mainland of Lee County. It is connected to Lee County via the Sanibel Causeway

Heavy rainfall, tropical storms, and hurricanes are the main flooding threats in the City of Sanibel. Possible reasons for flooding within the City's jurisdictional boundaries are deficiencies in maintenance, lack of drainage capacity, tidal events, or a storm event that exceeds design criteria. Storm surge could also impact the City by impeding proper operation of weirs and discharge into the bay.

Sanibel's Surface Water Management Plan provides for the islands interior freshwater wetlands system controlled by two main weirs. The City recognized the importance of high water levels in the interior freshwater system to displace salt water, to improve and to benefit vegetation and wildlife. In order to reduce extreme flooding in developed areas and the length of time of flooding in order to keep roads, driveways, and house pads drained to the extent possible, a weir control policy was put in place to allow for the opening of the weirs prior to or during a heavy rainfall.

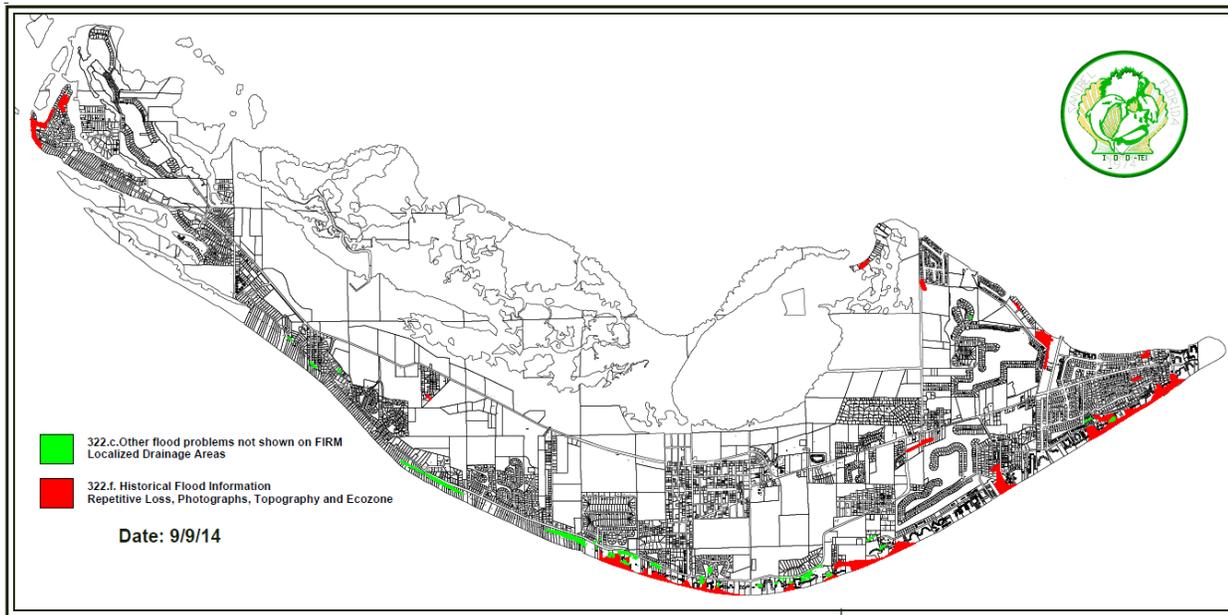
### ELEMENT II – FLOOD THREAT RECOGNITION

The City's main source for weather news updates is the National Weather Service (NWS) and our contractual independent weather consultant, Dave Roberts. The City also utilizes the

National Oceanic and Atmospheric Administration (NOAA) radar ([www.weather.gov](http://www.weather.gov)), the Weather Underground “WunderMap” ([www.wunderground.com/wundermap/](http://www.wunderground.com/wundermap/)), and Intellicast “interactive radar” ([www.intellicast.com/Local/WxMap.aspx?location=USFL0316](http://www.intellicast.com/Local/WxMap.aspx?location=USFL0316)), to track and plan for storm events.

Although the City has a manual rain gauge at Public Works, Lee County has digital rain gauges throughout the County. The closest location to Sanibel is at the Fort Myers Beach Plant located on Pine Rd., between Summerlin and San Carlos Blvd. Specific data can be downloaded at: <http://www.leegov.com/naturalresources/hydrological-monitoring/rainfall/raingaugedata>

The City also identified areas prone to flooding and areas of repetitive loss.



### **ELEMENT III – WARNING DISSEMINATION**

The City receives weather information and advisories from the National Weather Service and the Lee County Emergency Management via email or direct communication. The City also receives information and advisories via direct communication from the City’s weather consultant.

The City’s department heads possess mobile phones with email capabilities that receive weather advisories as well as notifications from the City’s Police Dept. and EOC on a 24hour/7days a week basis.

When the National Weather Service or Lee County Emergency Management issues a flood warning, flash flood watch, flash flood warning, or when flood is imminent, the City will provide pre-scripted notices to the community via the following methods:

1. City website, [www.mysanibel.com](http://www.mysanibel.com)
2. Social media (twitter, facebook, email);
3. Code Red calls; Register at <https://public.coderedweb.com/cne/en-US/BFB7CC4C6C0A>
4. Press releases
5. Email blasts [www.mysanibel.com/Departments/City-Manager-s-Office/Sign-Up-For-City-Announcements-and-Agendas](http://www.mysanibel.com/Departments/City-Manager-s-Office/Sign-Up-For-City-Announcements-and-Agendas)
6. If necessary, law enforcement will drive the affected areas to provide door-to-door public address warning notifications.

When tropical storm or hurricane watches and warnings are issued by the NWS, the City shall provide these to the general public through the means mentioned above, usually beginning 72 hours in advance of the event (when possible).

A copy of the City of Sanibel Flood Facts can be found on the City’s website: [www.mysanibel.com](http://www.mysanibel.com). The Flood Facts shall be sent mail annually to all residents in the City.

## **ELEMENT IV – FLOOD RESPONSE OPERATIONS**

### **Flood Threat Response**

In order to prevent flooding, the City implements a maintenance program of its stormwater drainage infrastructure, which includes canals, inlets, catch basins, outfalls, and drainage pipes, box culverts and weir structures are serviced. Canals are maintained to include:

- Culvert cleaning
- Harvesting
- Chemical treatment
- Obstruction removal
- Mowing of slopes and flat areas

Inspection of inlets, catch basins, and pipes is done on bi-annual basis by a City vendor. Drainage infrastructure is inspected and serviced the same year.

Box Culverts and Weir Structures are inspected bi-annually by a Structural Engineering firm. Box Culverts and Weir Structures repairs are made the following year.

The City's flood threat response and any weather related emergency response work in the following way:

1. The City receives notification from NWS or the County EOC of potential threats to the area.
2. Information provided to the City is disseminated to the public.
3. If and when event reaches the City, City personnel shall survey the City by concentrating its efforts on known flood prone areas.
4. When the City Government Center or Police dispatch center receive flooding reports, or any other reports related to the weather event, the City Manager or Public Works, will coordinate and begin the required response.

### **Response Actions**

The City Manager and the Chief of Police are responsible for the activation of the City's EOC and for the coordination and magnitude of the emergency response. Each City department has a specific responsibility.

- City Manager's Office (CM)  
The City Manager is responsible for the management of the emergency operation until the responsibility is transferred to the Chief of Police, Public Works Director or the Incident Commander.  
The City Manager's Office shall be responsible for disseminating all weather advisories as well as the City's current conditions. The City Manager's Office shall also be responsible for coordinating with the Information Technology (IT) Department for the dissemination of the information.
- Sanibel Police Department (PD)

The Sanibel Police Department shall be responsible for the security of City personnel as well as the public. The Sanibel PD shall protect public and private property. Sanibel PD along with Lee County Emergency Management shall be responsible for any evacuation.

- The Public Works Department (PWD)  
The Public Works (PW) Director shall be responsible for all decisions within the public right-of-way which includes City operated roadways, canals, weir control, and City facilities such as the City Hall, the Sanibel Police Department and Public Works Facility. The PWD shall also be responsible for the management of the City’s emergency debris removal contractors and the emergency debris monitoring firm. The PWD along with the Fire Department are responsible for providing sandbags to City residents and business owners.

The City will always promote and provide the public with safety recommendations and strategies throughout the year. Some public protection strategies are:

- Sandbagging property
- Flood proofing property
- Property evacuation
- Shelter in Place

**Emergency Response Actions**

Before a rain event with flooding potential reaches the City, the City Manager and Fire Department shall decide if and when sandbags will be provided to City residents and business owners. Sand bags shall be provided at the Fire Department distribution point, located at Sanibel Fire District Station #1, located at 2351 Palm Ridge Road. Residents and businesses should be prepared to fill and haul their own sandbags.

The first emergency responder at each scene is responsible for evaluating and reporting the situation to the Sanibel Police dispatch center. The first actions at the scene should be to protect others from being exposed to flood waters. If necessary and when possible the PWD shall barricade flooded roads to prevent traffic flow. If necessary and after approval from the Incident Commander, a command post shall be established. Any necessary evacuations shall be managed by Lee County Emergency Management and/or Sanibel Police. The PA shall be designated at the command post to provide updates and information to the residents, business owners, and the media.

Important emergency contacts:(For emergencies contact 911)

Sanibel Public Works Department:	(239)472-6397
Sanibel Police Department:	(239)472-3111
Lee County Emergency Management:	(239)533-0622
Sanibel Building Department	(239)472-4555
Sanibel Fire & Rescue:	(239)472-5525

## **Post-Flood Recovery**

Once flood waters have receded the PWD shall evaluate the stormwater drainage infrastructure and shall compare the findings with maintenance records to decide if the system is in need of maintenance, improvements, or if the system was overwhelmed by rains.

Flooded areas shall also be evaluated by the PWD to decide if the emergency debris removal contractor and debris monitoring firm need to be activated. If activated, the emergency debris removal contractor and debris monitoring firm shall be on the scene after being activated. The PWD Department shall decide if it is necessary to activate and prepare the City's debris staging and reduction sites. When activated the emergency debris removal shall establish posts on the sites as established in the City's Hurricane Plan. The debris monitoring firm shall process and record all debris removal operation for any State or Federal reimbursement request (if applicable).

The Building Department (BD) will send crews of building inspectors, along with members of the Structural Safety Committee, to assigned zones and perform damage assessment, and generate reports for Lee County. Lee County then sends these reports to FEMA. The BD will also establish an emergency permit center to make feasible the emergency repair permits process to residents and business owners. This process will ensure that all work performed during this period is performed by licensed contractors, is performed correctly, and properly inspected.

## **Continued Plan Management**

The City will test and update the flood response and warning plan as well as the hurricane plan on a yearly basis. Reviews and updates can be done on a yearly basis as new information and technologies become available but revisions should be completed at the beginning of the hurricane season.

An annual table top exercise shall be conducted to test the plan and train personnel on the use of the response plan. For the table top exercise all department heads and personnel that department heads consider essential, as well as a representative from the City's emergency debris monitoring firm shall be present. After the exercise is completed the City shall record the following information:

- List of participants;
- Lessons learned; and
- Recommendations or changes to the plan.

The plan may be revised based on the recommendations or after a real event.

Revised pages shall be provided to department heads. It is the responsibility of the plan holder to keep all copies of the current plan.

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## ELEMENT V – CRITICAL FACILITIES PLANNING

Critical facilities such as police and fire stations and utility buildings require special attention in floodplain management planning, as they play an important role before, during and after a flood emergency.

The inventory of the City's critical facilities is as follows:

- **Sanibel Police Department and Emergency Operations Center**, Dunlop Road, is built to withstand 155 mph winds and is elevated to 15 feet NGVD (6 feet above the base flood elevation).
- **Sanibel Fire and Rescue**, Palm Ridge Road Station 1, has been redeveloped to meet or exceed flood and wind requirements.
- This facility also houses County Emergency Medical Personnel and equipment.
- **Sanibel Fire and Rescue**, Sanibel-Captiva Road Station 2, has been redeveloped.
- This facility also house County Emergency Medical Personnel and equipment.
- **Island Water Association**, Sanibel-Captiva Road, except for pre-NFIP components, the water treatment plant and administrative offices are built to withstand 30 mph winds and elevated to the base flood elevation. A garage and equipment storage building is elevated to the base flood elevation.
- **Sanibel Public Works**, Dunlop Road, houses the City's emergency recovery equipment and is built to withstand 130 mph winds and both buildings and vehicle garage and storage areas are elevated to the base flood elevation (9 feet NGVD).
- **Sanibel Sewer System**, Donax Wastewater Reclamation Facility has all critical components elevated to the base flood elevation.
- **Sanibel Sewer System**, Wulfert Advanced Wastewater Reclamation Facility has all critical components elevated to the base flood elevation.

StormReady Community Certification

