

PROC FOR NATURE BIB 06/06

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In reply ref: Pam box #82
A7627 Pam #26-B

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
EVERGLADES NATIONAL PARK
P. O. BOX 275
HOMESTEAD, FLORIDA

Lidia
Donna

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September 7, 1960

EVERGLADES NATIONAL PARK
Reference Library

Memorandum

To: Chief Park Ranger, Everglades
From: Ranger Personnel, Flamingo
Subject: Flamingo Log of Hurricane Donna

This September day dawned bright and beautiful. Hurricane Donna had been working her way northwestward toward Florida threatening the southern Bahama Islands, but the morning advisory of the U. S. Weather Bureau forecasted no immediate threat to south Florida. Just in case a definite threat might develop it was necessary to know the current location of commercial fishermen or other boatmen in the District so the day was planned on boat patrol to locate any stragglers. District Maintenance Foreman Jack Lewis accompanied on the patrol and assisted in locating and marking a hazard to navigation off the mouth of the Harney River.

At 11:30 a.m. word was received, via radio, that a Green Alert for Hurricane Donna had been ordered by the Chief Ranger's Office. Since we were in the vicinity Jack and I proceeded directly to the Lostmans River Patrol Station and secured it, returning to Flamingo about 4 p.m. J. R. Whitehouse was left in charge of initiating the Green Alert at Flamingo. Sub-district Ranger Whitehouse and District Naturalist Muller very efficiently proceeded with the alert and requested the Everglades Park Company Resident Manager, who was off duty for the day, be contacted and advised. The Company employees and Departmental Managers lacking company leadership turned to the "Rangers" in the state of emergency. Some misunderstanding and slight panic resulted when unknowing company employees assumed a Green Alert meant immediate evacuation. Although a Company Hurricane Plan had been prepared copies of the plan had not been distributed to all employees, and a full awareness of the contents were not generally known. Resulting rumors and apprehensions were quelled by the two uniformed men at Flamingo who coordinated to implement the Green Alert. Although direct commands by NPS personnel or concessioner personnel could not be made without violating protocol advice was offered and taken in most instances.

Arrangements were made by many owners of private trailers in the company employee trailer park to transport trailers to Long Pine Key Campground or trailer parks in Homestead. Approximately half the trailers were removed from the area by 9 p.m. Ranger J. R. Whitehouse moved his family to the Pine Island residential area.

At approximately 8:30 p.m. Mr. William Golden, Everglades Park Co., Inc., Resident Manager arrived on the scene. Mr. Golden reported that a personal friend in the Miami Weather Bureau office gave assurance there was little to worry about from Hurricane Donna.

Thursday, September 8, 1960

Green alert preparations continued. When completed yellow alert preparations were begun according to Hurricane Warning plan. The yellow alert was ordered after the 11 a.m. Weather Bureau advisory which placed the storm at 22.2° Lat. and 76.0° Long. moving along directly westward toward the coast of Cuba. A more northerly course was expected after the storm hit the land mass of Cuba, but the Weather Bureau still predicted center of storm would hit in the vicinity of the Florida Straights or Key West. The general opinion at Flamingo was that we would be spared the full force of the storm.

All hands at Flamingo, Concessioner and National Park Service, worked hard at yellow alert preparations the entire day. Bob Knight, Executive Officer of Everglades Park Company arrived in the morning to personally organize his company efforts. Golden was finally convinced that preparations must be made and moving trailers was his biggest concern. All yellow alert preparations according to plan were completed by 6 p.m. except the moving of three company trailers and four NPS trailers, none of which had wheels to move with.

The Park Pilot flew over area and reported no boats in Florida Bay but several company boats and private boats were located in Roberts River, Coot Bay Canal and Old Homestead Canal where they were securing to weather the storm. A lost boat was located on Middle Cape by Miele but time did not permit salvage of it. All NPS boats but one were secured in boat shop. All company boats but two skiffs were sunk at dock or tied out in protected canals.

All but four vehicles were removed from the area by 9 p.m. Two NPS trucks, one concessioner truck and Roy Orme's private car and Bill Golden's private car remained.

The area was evacuated by 10:30 p.m. except for NPS Orme, Borgman and two Mullers. Concessioner personnel at Flamingo consisted of Golden and wife, McKeever, and Ettles. Company people on boats were Scudder and Allen in Homestead Canal. Ross and Lowry on houseboats in Roberts River. Linnie Brockt on boat in Roberts River and Ray Breedlove on Playmate in Coot Bay Canal. Commercial fisherman Buddy Knowles, wife and son in Coot Bay Canal.

Friday, September 9, 1960

J.R.Whitehouse and R. Kearney returned to Flamingo about 7 a.m. to assist in any final preparations. Two NPS trailers on wheels had been evacuated the day before but the third scheduled for evacuation could not be moved because of a broken wheel, so it was anchored as the three trailers without wheels had been the day before. Asst. Supt. Dodd inspected the state of preparedness about 10 a.m. and suggested that more adequate cover be put on air opening on tops of one of the trailers and taping of plate glass windows near museum. These final preparations were made. Bracing of overhead doors from above at the boat shop was also suggested by Mr. Dodd but lumber and extension ladders necessary to do this job were not available. A few loose items not previously collected were loaded and hauled to the dump.

All power tools in shop building were elevated to level of at least three feet above the floor.

A final check was made to determine that all doors were locked, and all items on the hurricane alert plan were completed.

A message from Mr. Pardue of the Miami Weather Bureau Office requesting hourly readings of wind, tide and barometer was relayed by radio to Hugh Muller and he recorded and transmitted the first of these observations at 10:45 a.m. Phone service was discontinued when Flamingo was evacuated of company personnel on Thursday. A direct line from the switchboard to the Visitor Center where Mr. Golden intended to ride out the storm was rigged, but line trouble in the vicinity of Everglades apparently rendered telephone communications inoperative as Weather Bureau communications were not received by telephone.

The red alert for Hurricane Donna was ordered following the 11 a.m. Weather Bureau Advisory which placed the storm at 23.6° Lat. 79.5° Long, some 200 miles southeast of the Florida Keys. Final evacuation of the area was made except for Mr. Golden and wife, the powerhouse operator and assistant, the District Ranger and Caretaker Orme. The latter two remained temporarily at Flamingo pending a decision regarding the need for protection personnel to remain in the area primarily because of post-storm danger of looting, etc. (The Mullers proceeded to Miami to look after personal property. Whitehouse, Kearney and Dold went to Pine Island.) particularly boat traffic coming into the area before road traffic might be established. Permission was granted the two men to stay at Flamingo and the activities of the afternoon consisted mostly of relaying hourly weather observations, 15 minutes before each hour. Roy Orme secured all water valves except those necessary for the limited operation to be effected during the storm. The Everglades Park Co., Inc., requested water be supplied to the Diesel power plant as long as possible through the storm, if practical; this request was granted. Several thousand dollars worth of meat was stored in deep freeze and a prolonged power failure following the storm plus a period of shutdown before the storm could mean the loss of this valuable merchandise. Food, water and emergency supplies were moved into the NPS portion of the Visitor Center, "our hurricane shelter". Mr. Golden and wife set up in the company portion of the Visitor Center, George Ettles and his assistant will stand by the power plant through the storm and relay wind velocity recorded by the anemometer there to the Visitor Center via portable radio. Mr. Golden also was provided with a portable radio and hourly schedules 20 minutes before the hour were arranged. Inaccessibility of the tide level indicator at the Marina necessitated the implementation of an alternate "stick" which could be read off the sea wall at the Visitor Center. Readings from the substitute tide gauge and wind velocities by remote control from the power house were recorded and transmitted by radio beginning at 6:45 p.m. Weather observations from 10:45 a.m. to 11:45 a.m. were as follows:

- 10:45 a.m. - Overcast, no rain. Wind: NNE, 5 m.p.h. Tide - 0.9 feet.
Barometer 29.74 inches
- 11:45 a.m. - Overcast, light drizzle. Wind ENE 10-12 m.p.h. Tide 0.1 ft.
Barometer 29.76 inches.
- 12:45 a.m. - Bright overcast, no rain. Wind ENE 23-32 m.p.h. Tide -0.1 ft.
Barometer 29.73 inches.

- 1:45 p.m. Bright overcast, no rain. Wind ENE 20-21 mph. Tide Minus 0.4 ft. Barometer 29.72 inches.
- 2:45 p.m. Moderate rain. Wind NE, 20 mph. Tide Minus 0.1 ft. Barometer 29.68 inches.
- 3:45 p.m. Moderate rain. Wind NE, 25-30 mph. Tide 0.6 ft. Barometer 29.64 inches.
- 4:45 p.m. Moderate rain. Wind NE, 18-20 mph. Tide 0.9 ft. Barometer 29.63 inches.
- 5:45 p.m. Moderate rain. Wind ENE, 25-30 mph, gusty. Tide 1.1 ft. Barometer 29.57 inches.
- 6:45 p.m. Moderate rain. Wind NE, 25 mph w/strong gusts to 60. Tide 1.0 ft. Barometer 29.53 inches.
- 7:45 p.m. Moderate rain. Wind NNE 30-40 mph, gusts to 50. Tide 0.4 ft. Barometer 29.50 inches.
- 8:45 p.m. Moderate rain. Wind NNE, 45 to 50, gusts to 67. Tide Minus 0.2 feet. Barometer 29.47 inches.
- 9:45 p.m. Light to moderate rain. Wind. NE, 35-40 mph, gusts to 52. Tide Minus 0.7 feet. Barometer 29.42 inches.
- 10:45 p.m. Moderate to heavy rain. Wind NE 45-50 mph, gusts to 65. Tide Minus 0.9 ft. Barometer 29.36 inches.
- 11:45 p.m. Heavy rain. Wind NE 60-65, gusts to 81. Tide Minus 1.2 ft. Barometer 29.26 inches.

Saturday, September 10, 1960

This day started off with a roar -- and a clatter of crashing glass. Power and outside radio communication lasted just one hour past midnight. At 1:05 a.m. George Ettles concluded that the power plant must be shut down because driving rain coming through windows threatened to get the control panel wet. The last anemometer recording received from the power house at 12:45 a.m. registered a wind velocity of 70-75 mph from the NE with gusts to 86 mph. Because of the fury of the wind it did not seem advisable to "hang" over the sea wall to get a tide reading so wind velocity and barometer readings were the only recordings made at this time. The downward plunging barometer read 29.16 inches. The tide was estimated to be approximately minus 1.5 feet which would have reduced a good portion of Florida Bay to dry ground or at least exposed mud.

Immediate contact by portable, park set radios was established between the power house, Everglades Park Co. Visitor Center and National Park Service Visitor Center after the power went off, and a 30 minute schedule was set up for contact by radio between the three locations. (Mr. Golden reported windows were out and the roof was off in the Dining Room and Gift Shop at 1:30 a.m.) He and his wife were holed up under the pot and pan sink in the kitchen. The power house reported they had lost part of their roof, and the anemometer. The NPS section of the Visitor Center appeared to be

undamaged at this point, but during the radio conversation a crash of glass was heard and the plate glass windows between the museum and office section were no more. Roy Orme and I were sitting it out in the first aid room. Almost immediately the roof began to leak and we knew then we had lost at least part of the roof, probably most of it as leaks through light fixtures occurred in every room of the office section. After moving furniture away from leaks as much as possible we went back to our selected location in the first aid room and stayed there through the remainder of the storm expecting the plaster to fall off the ceiling any time but it never did.

Weather observations the remainder of the night consisted of Barometric pressures only as facilities for other observations were then nonexistent. As the rate of fall increased pressures were recorded at closer intervals.

1:45 a.m.	28.87"	2:45 a.m.	28.23"
3:15 a.m.	27.97"	3:30 a.m.	27.93"
3:45 a.m.	27.90"	4:00 a.m.	28.03"
4:15 a.m.	28.13"	4:30 a.m.	28.20"
5:00 a.m.	28.38"	5:30 a.m.	28.54"
6:00 a.m.	28.77"	7:00 a.m.	28.98"
8:00 a.m.	29.14"	9:00 a.m.	29.98"
10:00 a.m.	29.30"	11:00 a.m.	29.40"
12:00 noon	29.44"		

Golden reported at 2 a.m. that his end of the building was a shambles, but that he was holding tight under the sink. Radio contact could not be established with the power house. No material change developed in the NPS section of the Visitor Center.

Wind velocity steadily increased until approximately 3:15 a.m. when a slight reduction in intensity became evident though it continued to blow well in excess of 100 mph. For approximately 40 minutes the slightly less violent winds observed for about 30 to 40 minutes and then increased to what seemed the most violent of the storm, perhaps because the wind was then blowing from a broadside angle. At 3:30 Mr. Golden requested advice on where to move because of debris flying into kitchen from the dining room indicating that the wind had shifted to the eastward. It was difficult to tell the true direction of the wind being confined in a leeward, isolated room, but direct eastern direction probably occurred somewhere around 3:30 or 4:00 o'clock.

During this 4:00 to 4:30 period swirling winds began to blow through the partially open windows on the lee side and attempts to reduce the size of the openings created a very noticeable pressure effect. It resulted in suction of venetian blinds flat against the windows with considerable force. The venetian blinds had been left down as possible protection against flying glass, The windows were reopened to relieve this pressure.

Mr. Golden elected to retreat from the kitchen to the concessioner offices downstairs on the leeside of the building and at 4:00 a.m. reported he was snug and secure.

After 4:00 a.m. the wind moved into a more southeasterly direction and for nearly two hours appeared to gather all its force to make one last supreme effort to demolish the concrete and steel buildings, in which we were all seeking refuge. There were a few doubts as to who would emerge the victor. No protection but the concrete walls stood between us and the unhindered

blast across open Florida Bay.

By 5:45 a.m. the wind began to diminish slightly and moved into an almost southerly direction. Golden reported no water at the ground floor level where he was, but at 6:00 a.m. the first light of day revealed at least 40 inches of water above the floor level and a report from Golden revealed that he had had to abandon his downstairs retreat because of rising water minutes after the 5:30 radio check. He selected the top of the elevator shaft as his final place of refuge and stayed there until the storm subsided. By 6:30 a.m. the wind direction was just a few degrees West of South and continued from that direction for several hours.

With the coming of daylight complete desolation was exposed to view. Though the severity of the storm was experienced through the night the damage it wrought surpassed expectations. Hardly a tree remained standing, those that did had not a leaf left on them. A few sturdy palm trees survived to show the world the only green that could be seen anywhere. Many of these were partially or totally submerged in muddy, frothing waters. As visibility increased with the coming of daylight all eyes turned toward the powerhouse and were relieved to see the structure still standing though not much of the roof was left. Radio contact at 6:30 with the fellows there relieved the anxiety felt since the last contact at 1:30 a.m. All was well with the personnel at Flamingo, but several boats with personnel aboard in creeks and waterways in the back country remained to be accounted for. No possible rescue reconnoitering could be initiated until wind and sea subsided. Not until about 8 a.m. was it possible to venture out the back door, in the lee, to survey the complete damage of the storm. Looking westward with binoculars the motel remained standing though water was coursing through the windows and doors in torrents. Beyond that the only building in sight was the Coleman Erwin house, the only remnant of "Old Flamingo". It was still standing, but appeared to be damaged considerably. One small piece of wall on the westernmost restroom in the campground was visible. Not a sign of the five other buildings in this direction could be seen. To the north the Marina building was visible though completely obliterated at times by crashing waves. The NPS shop and equipment buildings were visible. The roofs and supporting members were there, but the walls were gone along with all equipment in the buildings. The boat shelter stood out high and obvious above the broken tangle of trees without any apparent damage. Two company house trailers lacking wheels for evacuation had been left at the service station but were now nowhere in sight. Also an old car there was gone. The Service Station minus windows and doors, still stood. A wall of the Ranger Quarters to the east was visible through the broken trees but the extent of damage there could not be determined without closer examination. Three house trailers without wheels left on the far side of the quarters would be out of view if they remained, but little imagination was required to know they had gone. As mentioned the roof blew off all sections of the Visitor Center. Windows were out in all the upstairs concessioner part and the three panels between the museum and NPS office section.

Radio contact with Pine Island was attempted without success until transmissions between Ranger J. R. Whitehouse in vehicle proceeding to Flamingo and Asst. Chief Ranger Maxwell at Pine Island were received on a pack set set up on the back porch of the Visitor Center. Besides the limited range of these portable radios the battery power had been reduced somewhat by all night use and our transmissions were not powerful enough to be read by the mobile unit or Pine Island. Contact was finally established by talking into microphones of two different sets at the same time at about 10:10 a.m.

Personnel at Flamingo were reported unhurt and a report of apparent property damage was transmitted to the Asst. Chief Ranger, and Superintendent Hamilton. As it appeared all boats at Flamingo were lost a request was made for delivery of a skiff from Pine Island as soon as possible to check out the boats in the back country.

Near hurricane force winds from a SSW direction still persisted and impeded the progress of J. R. Whitehouse towards Flamingo. It was not until about noon that J. R. Whitehouse reached West Lake where incoming water forced him to retreat back up the road toward Nine Mile Bend. Water at Flamingo had receded by this time to a depth of 8 feet, just even with the top of the sea wall at the Visitor Center. As mentioned maximum water of 12.0 feet occurred between 6:00 - 6:30 a.m. and had probably attained that height from a minus 1.56 to 2 feet in about one hour's time. It receded much more gradually. It had dropped about one foot by 9:00 a.m. and approximately another foot by 10. Approximate tide levels were observed as follows:

6-7 am	12 feet	4 pm	7 feet
9 am	11 feet	6 pm	6.5 feet
10 am	10 feet	9 pm	6 feet
12 noon	8 feet	11 pm	5.5 feet

Rain: Rainfall throughout the storm was relatively light. During the most severe portion of the storm (1:30 to 5:30) practically no rain fell. Approximately two hours before and after this period there was moderate to heavy rain. Only light to moderate rain preceded and followed the storm. The storm and the amount of rainfall has not been recorded. Numerous lightning flashes were observed throughout the most severe portion of the storm.

At about 3:00 p.m. Roy and I grabbed a sandwich, the first either of us had eaten since breakfast the day before. It was not that we were short of food, just short on appetite. Not knowing how well the boys at the Power house had fared for food and water we decided to try and wade to them with some. Water level at the utility road east of the bridge was still about three feet deep and while deliberating about wading through it saw John Scudder and John Allen coming down the canal in a skiff and then almost immediately saw the power house boys wading out to meet us. We all rendezvoused at the bridge and returned to the Visitor Center by skiff. Word was relayed via radio to Allen and Scudder's wives that they were all right, and we then (about 4:15) took a cruise over to our quarters to access the damage there. We hit bottom on the road at the Employee Trailer Park, tied the boat to a pile of debris and waded the remainder of the way. A complete surprise awaited us. Rain water hadn't even gotten the floor wet. The only damage observed was the downstairs car port and utility section. Some of the concrete louvers there had been washed out and the hot water heaters and washing machine were washed away.

Returning to the Visitor Center the "Chekika" was discovered to have miraculously escaped major damage and was still tied to trailer sitting in the boat shop even though all the walls of the building were gone. It was wedged between two steel posts and couldn't easily be removed, but outside of scratches and gouges appeared to be in operating condition. Even the radio was operative. The "Prowler", "Osceola" and skiffs did not fare so well. The "Prowler" was spotted some 300 yards to the north hung-up in a clump of broken mangroves. The MFG skiff was about 100 yards farther west. The "Osceola" and Playcraft were nowhere in sight.

Scudder and Allen returned to their big boats in the old Homestead Canal and agreed to check on the parties in Coot Bay Canal when they returned to their boats. A check on boats in Roberts River would have to wait until the next day as seas were still too rough for any craft available for use.

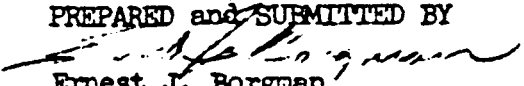
Radio check with J. R. Whitehouse at 6:30 p.m. indicated water would likely remain too high to make it through to Flamingo before the next morning so he was planning to return to Pine Island. A report of the condition of the quarters was relayed to Pine Island.

Knowing of nothing else we could do Roy and I decided to catch up on some much needed sleep. But at about 9 o'clock were rudely awakened by J. R. Whitehouse who had followed his seeing eye Assistant, Bob Kearney, down the road to Flamingo. Kearney had walked ahead to determine the depth of water and location of any possible washouts. J. R. Whitehouse followed behind with pickup in water sloshing against the running boards most of the way. The mobile radio in J. R.'s pickup provided the first satisfactory means of communications between Flamingo and Pine Island. A complete report of the situation at Flamingo was transmitted to the Chief Ranger. Boats and manpower for possible rescue missions were promised the next morning.

September 11, 1960

Superintendent Hamilton, Asst. Superintendent Dodd, Chief Ranger Nelson, Asst. Chief Ranger Maxwell, Everglades Park Co., Director Pegrarn, and Everglades Park Company Director Knight arrived early to direct rescue operations. Knight and Pegrarn each brought a boat. A skiff was brought from Pine Island and the Chekika was launched. Maxwell and Knight scouted the Roberts River country and found all boats there secure. Whitehouse and Bill Mills in the Chekika covered the Shark River area and found ten boats that had weathered the storm in that area. These boats had apparently come after Ralph Miele declared the area clear the day before the storm. All were secure, some suffered minor damage. Don Sullivan, Tommy Williams and Lou Watson managed to slip through the locked gate near Long Pine Key Road with a boat and offered their help in rescue operations. Since rescue operations were pretty well in hand their help was not needed, but they were allowed to go to Everglades to check on Tommy William's mother. All visitors were stopped at the locked gate. Nobody will be allowed into the area until salvage operations are complete and order restored.

PREPARED and SUBMITTED BY


Ernest J. Borgman
District Ranger
Mangrove District