

Fortunate Boaters on Thanksgiving Day 2005

A casual boating trip offshore New Smyrna Beach turned into a life and death struggle for four boaters on Thanksgiving Day. They left the boat ramp around 5 am and were enjoying a morning catching many fish about 12 miles offshore, but suddenly the boat started to take on water and capsized around 10 am. The four spent the rest of the day and night clinging to the side of the boat before being rescued around 10 am on Friday about 25 miles offshore.

The [12Z surface map](#) showed a rather tight gradient across the area producing a moderately strong offshore wind flow. The morning forecast captured the dangers well and called for west/southwest winds at 15 to 20 knots with a Small Craft Exercise Caution for Winds headline near shore. A Small Craft Advisory for Winds was in effect beyond 20 nm. The boaters may have been fooled by flat seas at the boat ramp. Also they weren't going to be going very far offshore. However, the winds probably exceeded the 15-20 knots in the forecast as buoys 41009 and 41012 reported 20-25 knots most of the day. Seas were around 4 feet at 41009 but were 5-6 feet at 41012. Very short period waves (4-5 second period) produced choppy conditions. One boater's comment that "a swell hit us" is inaccurate as the wave was not a swell. It was a short period wind wave, probably 4+ feet with a 4 second period, which is very steep.

The forecast was handled well by having headlines in the forecast. Seas at 2 to 3 feet with a 15-20 knot wind may have been confusing, but with a warm advection pattern and offshore winds, there was low level stability (warmer air flowing over cooler water) and limited fetch. Seas may have been more like 1-2 feet near shore and 3-4 feet at 20 nm. Normally that is not something that boaters would get worried about though. Of course, based on wave theory, 1 in a 100 waves would be 1.67 times higher or approximately 5-6 feet. This may have been the "swell" that one of the boaters referred to. These higher waves can occur quite frequently too, once every 5-10 minutes. After a while, water accumulating in the bottom of the boat can make it unstable.

One issue that this case raises is the need to know about wave steepness as the short period of the waves was the main causative factor. One of the goals for the Coastal Waters Forecast is to incorporate a wave steepness value. Another issue is that the boaters were probably looking at the 10 pm forecast from the night before. That forecast correctly bumped up winds to 15-20 knots for the first period of the forecast and added a SCEC statement (good!), but the Thanksgiving Day forecast still had 10-15 knots. Sometimes when the forecaster updates period one, the second period will need some adjustment also (a lot of boating decisions are made the night before).

In conclusion, this was a rather rare case where seas were substantially lower than normal exercise caution criteria, but the west winds were strong enough to generate choppy short period waves which produced dangerous conditions for small craft. Also, this is another example of how vital the "exercise caution" statement is in Florida since there are so many "weekend warriors" operating very small boats.

FZUS52 KMLB 240927
CWFMLB

EAST CENTRAL FLORIDA COASTAL WATERS FORECAST
NATIONAL WEATHER SERVICE MELBOURNE FL
427 AM EST THU NOV 24 2005

ATLC COASTAL WATERS FROM FLAGLER BEACH TO JUPITER INLET OUT 60 NM

AMZ500-241530-
SYNOPSIS FOR FLAGLER BEACH TO JUPITER INLET OUT 60 NM-
427 AM EST THU NOV 24 2005

.SYNOPSIS...DEEP LOW PRESSURE OVER THE GREAT LAKES...WITH RIDGE AXIS
SUPPRESSED TO OUR SOUTH...WILL PRODUCE GUSTY OFFSHORE WINDS

TODAY. A WEAK COLD FRONT WILL DISSIPATE AS IT PUSHES DOWN THE FLORIDA PENINSULA FRIDAY. HIGH PRESSURE BUILDING ACROSS THE SOUTHEAST AND INTO THE ATLANTIC WILL RESULT IN WINDS SHIFTING TO THE NORTHEAST SATURDAY AND GRADUALLY VEERING TO THE SOUTHEAST BY MONDAY.

.GULF STREAM HAZARDS...WEST SOUTHWEST WINDS 20 KNOTS MAINLY NORTH OF COCOA BEACH INTO THIS EVENING.

THE APPROXIMATE LOCATION OF THE WEST WALL OF THE GULF STREAM BASED ON SATELLITE DATA ANALYSIS AS OF NOV 23 AT 1000 AM...

52 NAUTICAL MILES EAST OF PONCE INLET.
29 NAUTICAL MILES EAST OF PORT CANAVERAL.
25 NAUTICAL MILES EAST OF SEBASTIAN INLET.
19 NAUTICAL MILES EAST OF FORT PIERCE INLET.

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AMZ550-241530-
/O.ROU.KMLB.MA.F.0000.000000T0000Z-000000T0000Z/
COASTAL WATERS FROM FLAGLER BEACH TO COCOA BEACH OUT 20 NM-
427 AM EST THU NOV 24 2005

...SMALL CRAFT EXERCISE CAUTION FOR WINDS...

.TODAY...WEST TO SOUTHWEST WINDS 15 TO 20 KNOTS. SEAS 2 TO 3 FEET.
INTRACOASTAL WATERS CHOPPY.
.TONIGHT...WEST WINDS 10 TO 15 KNOTS. SEAS 2 TO 3 FEET. INTRACOASTAL WATERS
A LIGHT CHOP.
.FRIDAY...NORTH WINDS 5 TO 10 KNOTS. SEAS 2 TO 3 FEET. INTRACOASTAL WATERS A
LIGHT CHOP.
.FRIDAY NIGHT...NORTHEAST WINDS 10 TO 15 KNOTS. SEAS 3 TO 4 FEET.
INTRACOASTAL WATERS A LIGHT CHOP.
.SATURDAY...EAST WINDS 10 TO 15 KNOTS. SEAS 4 TO 6 FEET. INTRACOASTAL WATERS
A MODERATE CHOP.
.SATURDAY NIGHT...EAST WINDS 10 TO 15 KNOTS. SEAS 5 TO 6 FEET. INTRACOASTAL
WATERS A LIGHT CHOP.
.SUNDAY...SOUTHEAST WINDS 10 TO 15 KNOTS. SEAS 4 TO 6 FEET.
.MONDAY...SOUTHEAST WINDS 15 TO 20 KNOTS. SEAS 4 TO 6 FEET. SLIGHT CHANCE OF
SHOWERS.

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AMZ570-241530-
/O.NEW.KMLB.SI.Y.0003.051124T0927Z-051125T0200Z/
WATERS FROM FLAGLER BEACH TO COCOA BEACH 20 TO 60 NM OFFSHORE-
427 AM EST THU NOV 24 2005

...SMALL CRAFT ADVISORY FOR WINDS IN EFFECT THROUGH THIS
EVENING...

.TODAY...WEST TO SOUTHWEST WINDS 20 KNOTS. SEAS 3 TO 5 FEET.
.TONIGHT...WEST WINDS DECREASING TO 10 TO 15 KNOTS. SEAS 3 TO 5 FEET.
.FRIDAY...NORTH WINDS 5 TO 10 KNOTS. SEAS 3 TO 4 FEET.
.FRIDAY NIGHT...NORTHEAST WINDS 10 TO 15 KNOTS. SEAS 3 TO 4 FEET.

.SATURDAY...EAST WINDS 10 TO 15 KNOTS. SEAS 4 TO 6 FEET.
.SATURDAY NIGHT...EAST WINDS 15 TO 20 KNOTS. SEAS 6 TO 7 FEET.
.SUNDAY...SOUTHEAST WINDS 15 TO 20 KNOTS. SEAS 4 TO 6 FEET.
.MONDAY...SOUTHEAST WINDS 15 TO 20 KNOTS. SEAS 4 TO 6 FEET.

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AMZ555-241530-
/O.ROU.KMLB.MA.F.0000.000000T0000Z-000000T0000Z/
COASTAL WATERS FROM COCOA BEACH TO JUPITER INLET OUT 20 NM-
427 AM EST THU NOV 24 2005

...SMALL CRAFT EXERCISE CAUTION FOR WINDS...

.TODAY...WEST TO SOUTHWEST WINDS 15 TO 20 KNOTS. SEAS 2 TO 3 FEET.
INTRACOASTAL WATERS A MODERATE CHOP.
.TONIGHT...SOUTHWEST WINDS 10 TO 15 KNOTS. SEAS 2 TO 3 FEET. INTRACOASTAL
WATERS A LIGHT CHOP.
.FRIDAY...WEST WINDS 5 TO 10 KNOTS BECOMING NORTH LATE IN THE AFTERNOON.
SEAS 2 FEET. INTRACOASTAL WATERS A LIGHT CHOP.
.FRIDAY NIGHT...NORTHEAST WINDS 10 TO 15 KNOTS. SEAS 3 TO 4 FEET.
INTRACOASTAL WATERS A LIGHT CHOP.
.SATURDAY...EAST WINDS 10 TO 15 KNOTS. SEAS 4 TO 6 FEET. INTRACOASTAL WATERS
A MODERATE CHOP.
.SATURDAY NIGHT...SOUTHEAST WINDS 10 TO 15 KNOTS. SEAS 5 TO 6 FEET.
INTRACOASTAL WATERS A LIGHT CHOP.
.SUNDAY...SOUTHEAST WINDS 15 TO 20 KNOTS BECOMING EAST 10 KNOTS IN THE
EVENING. SEAS 4 TO 6 FEET.
.MONDAY...SOUTHEAST WINDS 10 TO 15 KNOTS. SEAS 4 TO 6 FEET.

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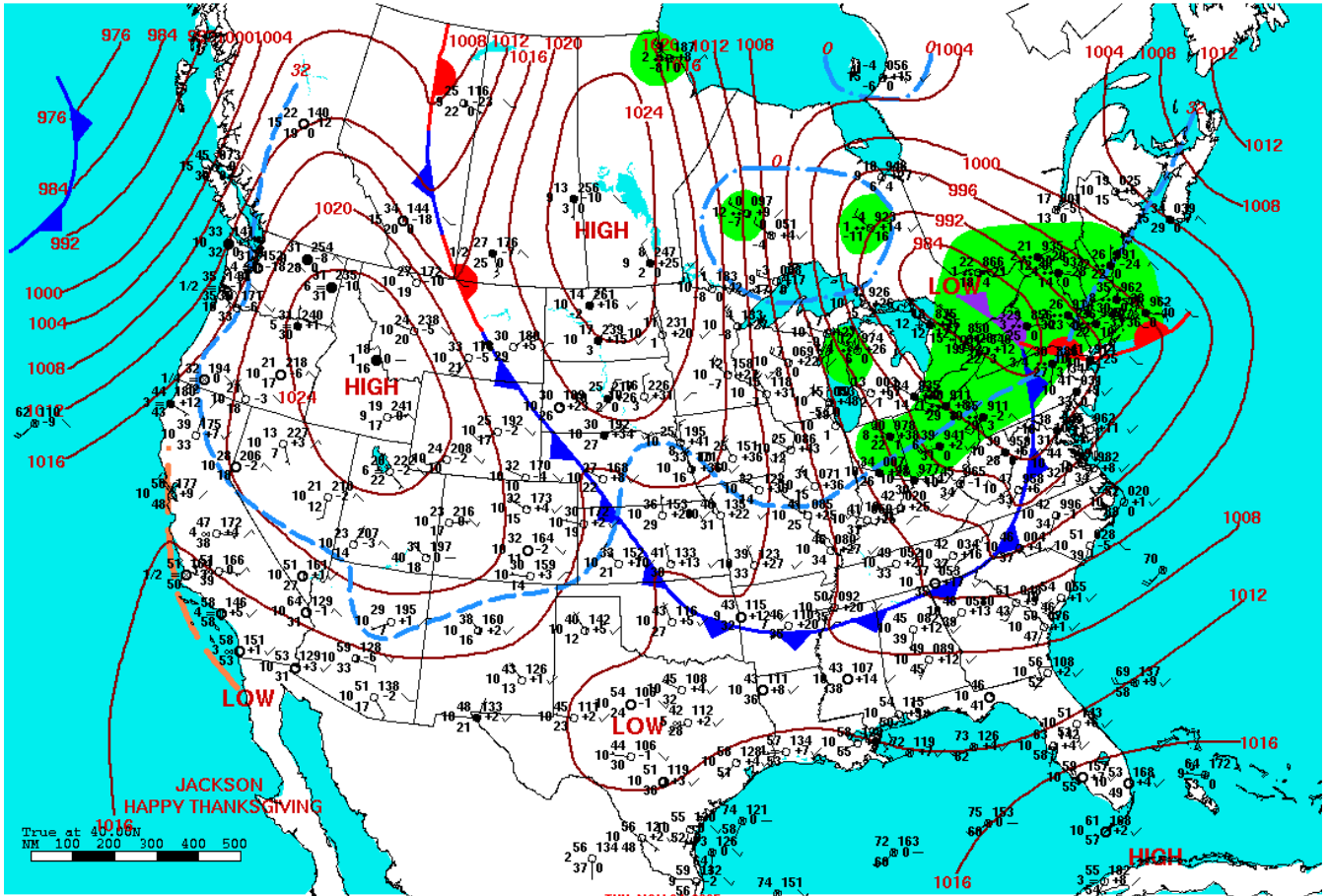
AMZ575-241530-
/O.ROU.KMLB.MA.F.0000.000000T0000Z-000000T0000Z/
WATERS FROM COCOA BEACH TO JUPITER INLET 20 TO 60 NM OFFSHORE-
427 AM EST THU NOV 24 2005

...SMALL CRAFT EXERCISE CAUTION FOR WINDS...

.TODAY...WEST WINDS 15 TO 20 KNOTS. SEAS 3 TO 5 FEET.
.TONIGHT...WEST WINDS 10 TO 15 KNOTS. SEAS 3 TO 4 FEET.
.FRIDAY...WEST WINDS 5 TO 10 KNOTS BECOMING NORTH LATE IN THE AFTERNOON.
SEAS 2 TO 3 FEET.
.FRIDAY NIGHT...NORTHEAST WINDS 10 TO 15 KNOTS. SEAS 3 TO 4 FEET.
.SATURDAY...EAST WINDS 10 TO 15 KNOTS. SEAS 4 TO 6 FEET.
.SATURDAY NIGHT...EAST WINDS 15 KNOTS. SEAS 5 TO 6 FEET.
.SUNDAY...SOUTHEAST WINDS 15 TO 20 KNOTS. SEAS 5 TO 7 FEET.
.MONDAY...SOUTHEAST WINDS 15 TO 20 KNOTS. SEAS 4 TO 6 FEET.

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KELLY/WIMMER



Surface Weather Map and Station Weather at 7:00 A.M. E.S.T.