National Transportation Safety Board

Office of Marine Safety
Washington, D.C. 20594-2000
December 13, 2016

ATTACHMENT 27 to the METEOROLOGY GROUP FACTUAL REPORT
DCA16MM001

Bon Voyage System screenshots of Joaquin's forecast center position and wind fields, forecast sea-level pressure, surface wind, significant wave height, rogue wave likelihood, and "Tropical Report" text boxes for all forecast times (every 3 hours) in each main BVS weather file emailed to *El Faro* between 2300 EDT on September 29, 2015, and about 0500 EDT on October 1, 2015.

***Note - Parameter numbers in the boxes along the top of each screenshot should be ignored. The numbers indicate values for each parameter according to where the computer screen cursor (not visible) was at the time the screenshot was taken. The numbers are not significant.**

Submitted by: Mike Richards
NTSB, AS-30

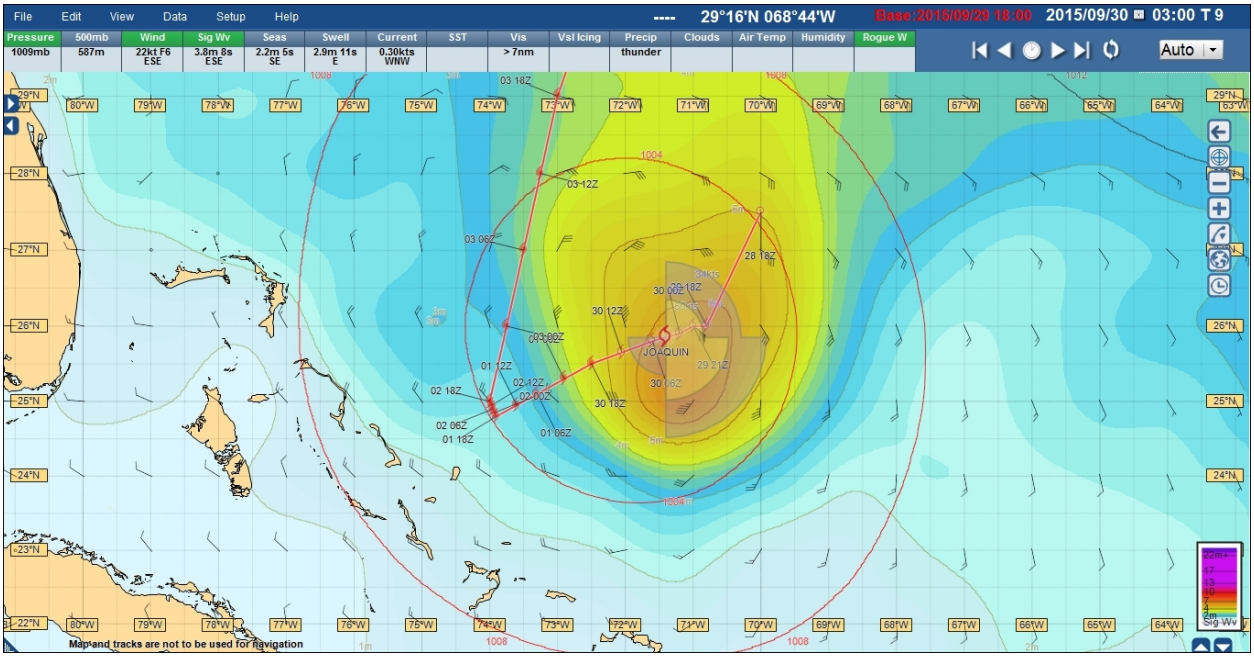


Figure A – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2300 EDT on September 29, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

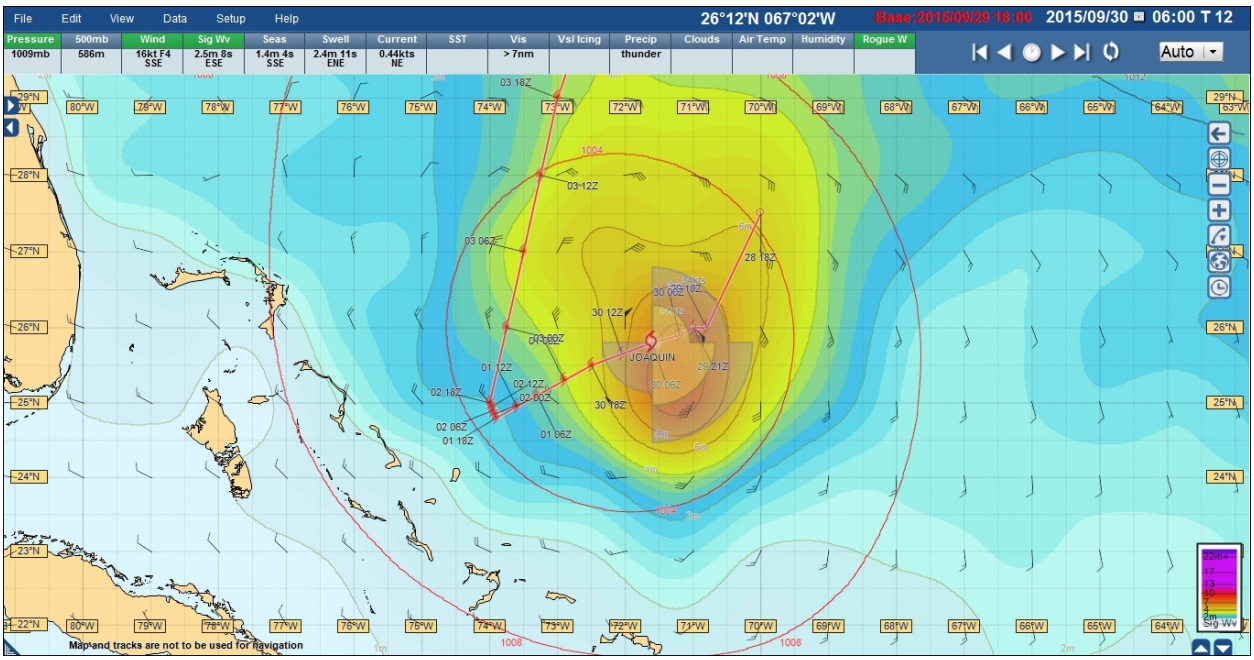


Figure B – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0200 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

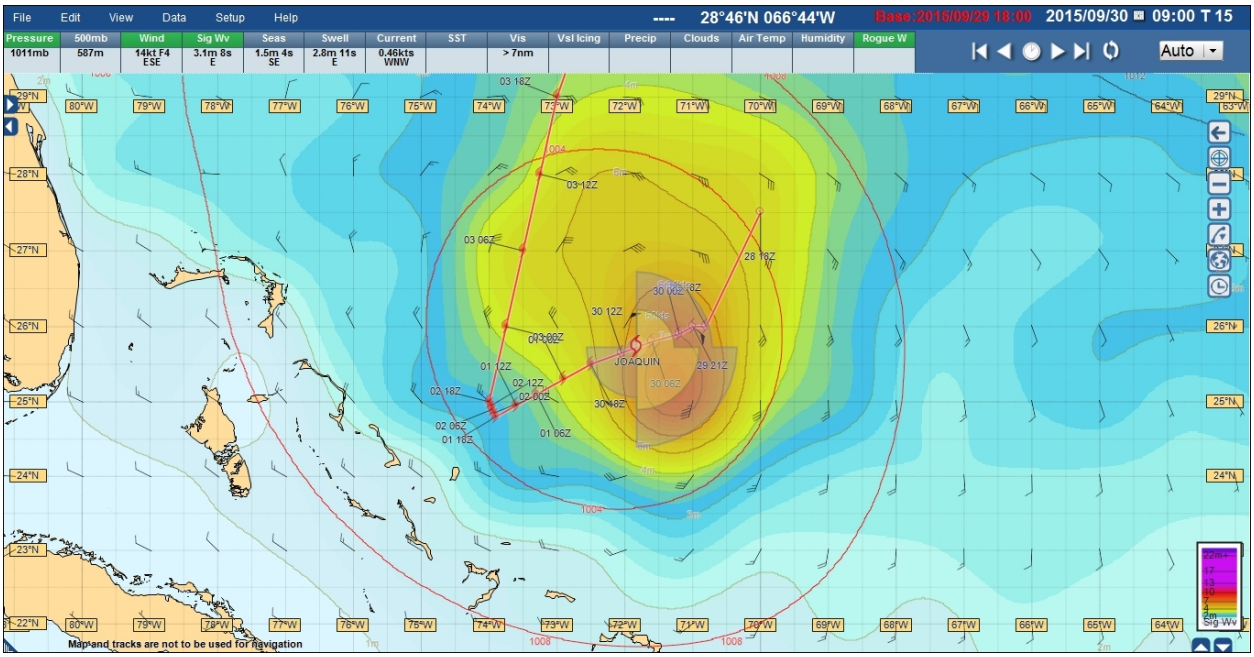


Figure C – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

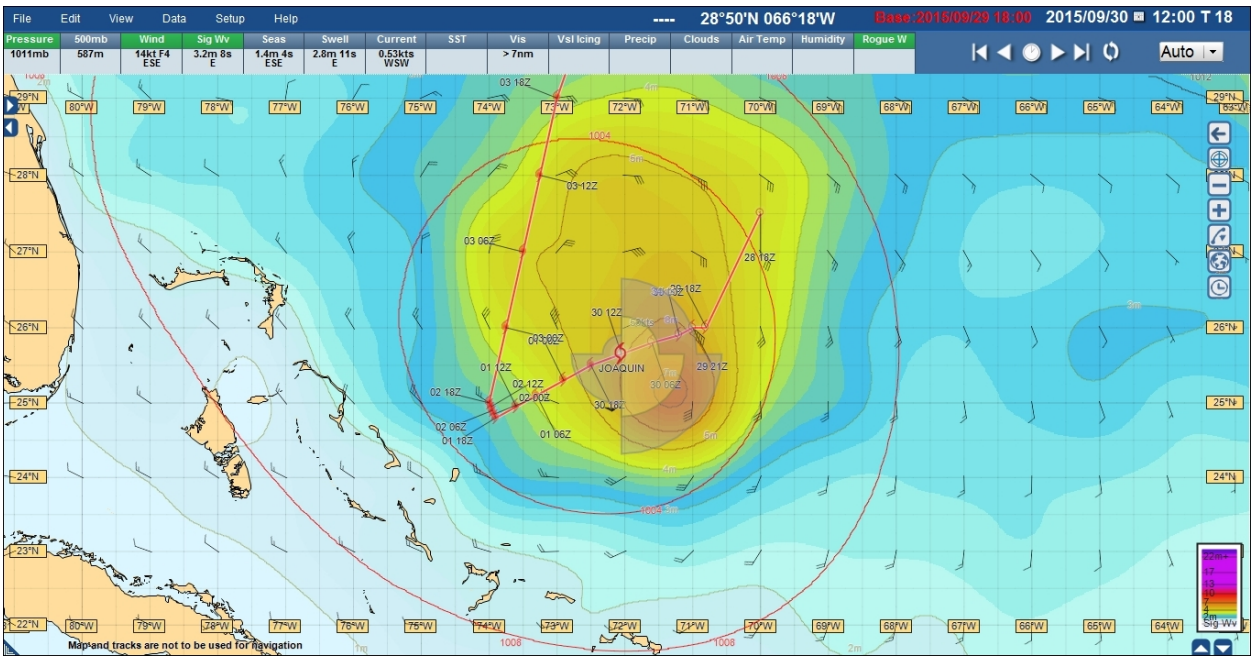


Figure D – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

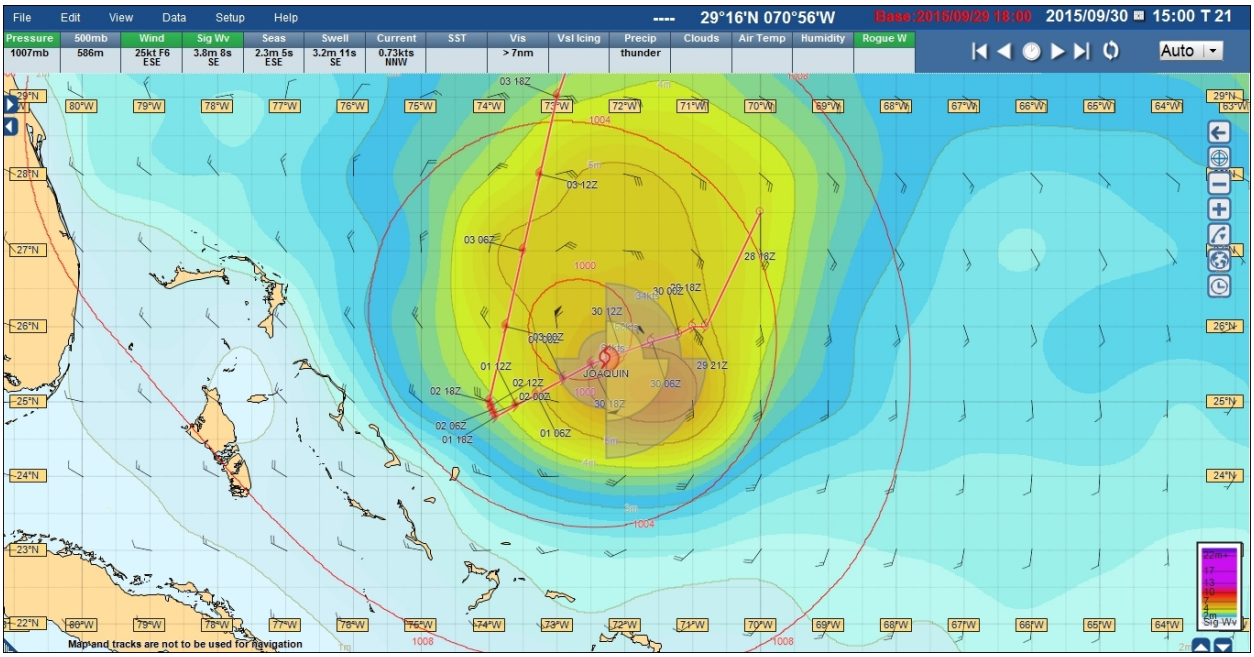


Figure E – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1100 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

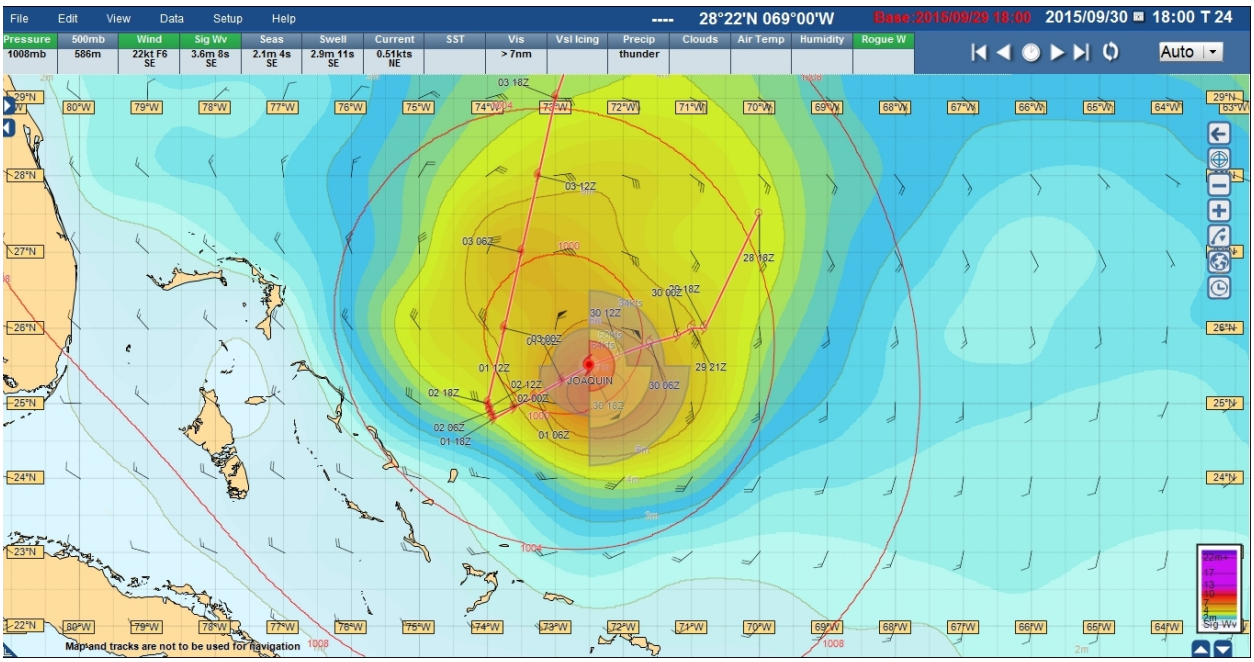


Figure F – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1400 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

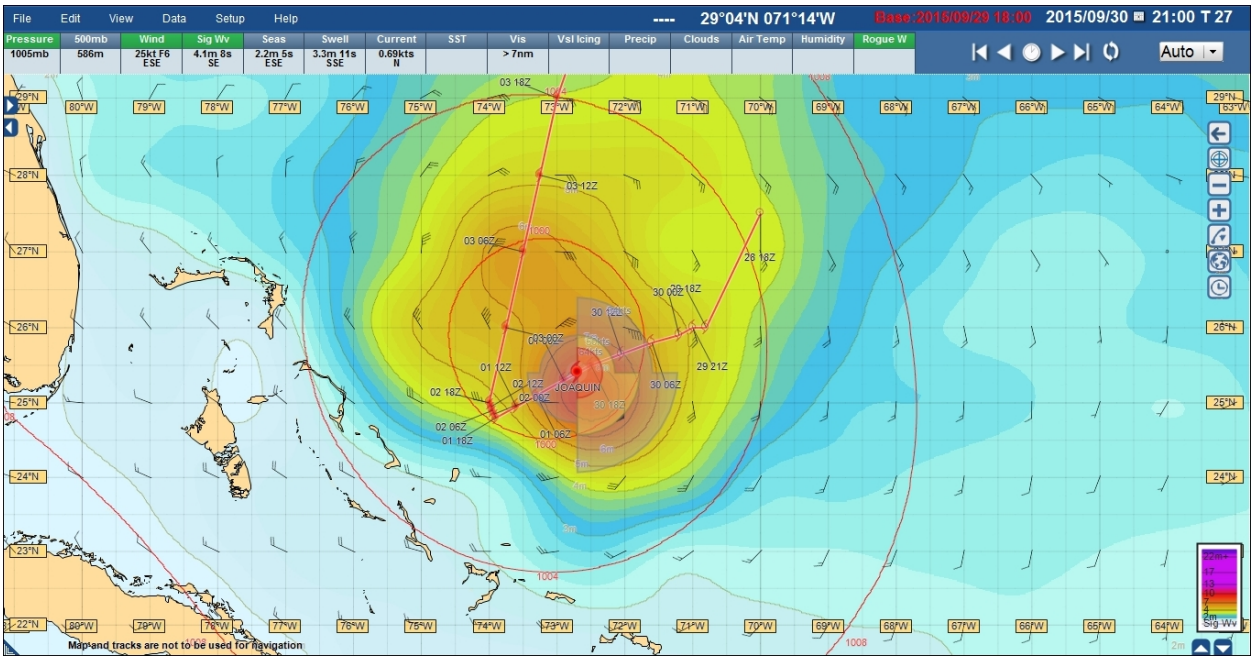


Figure G – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1700 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

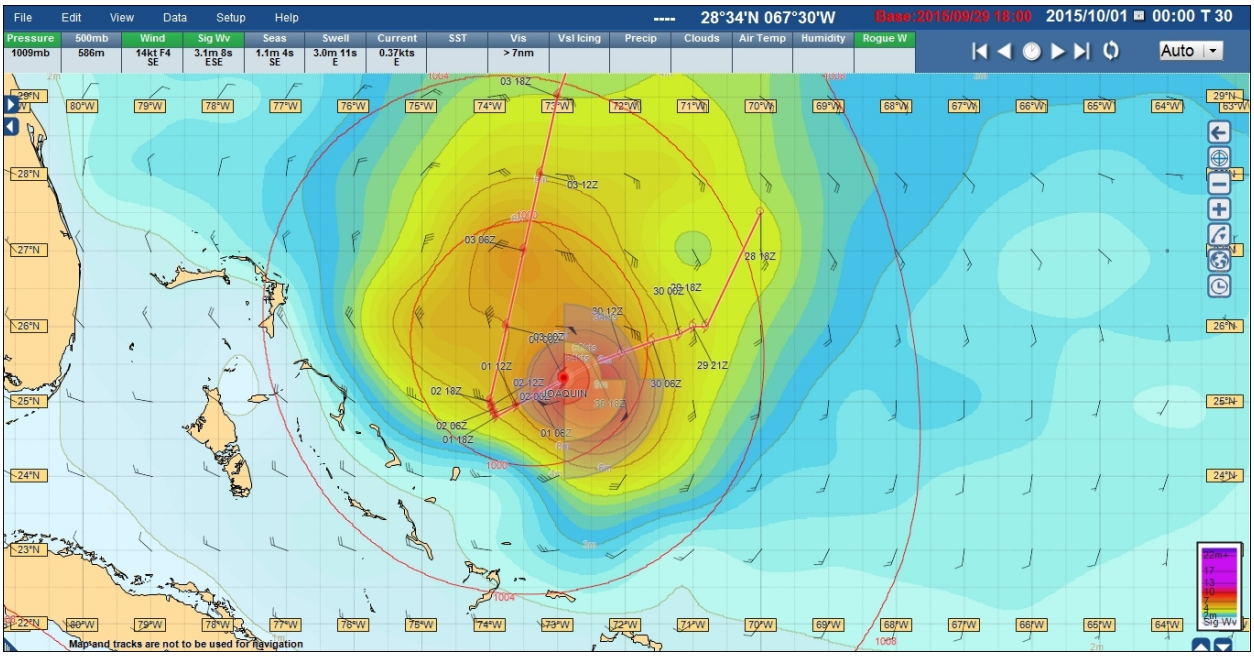


Figure H – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2000 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

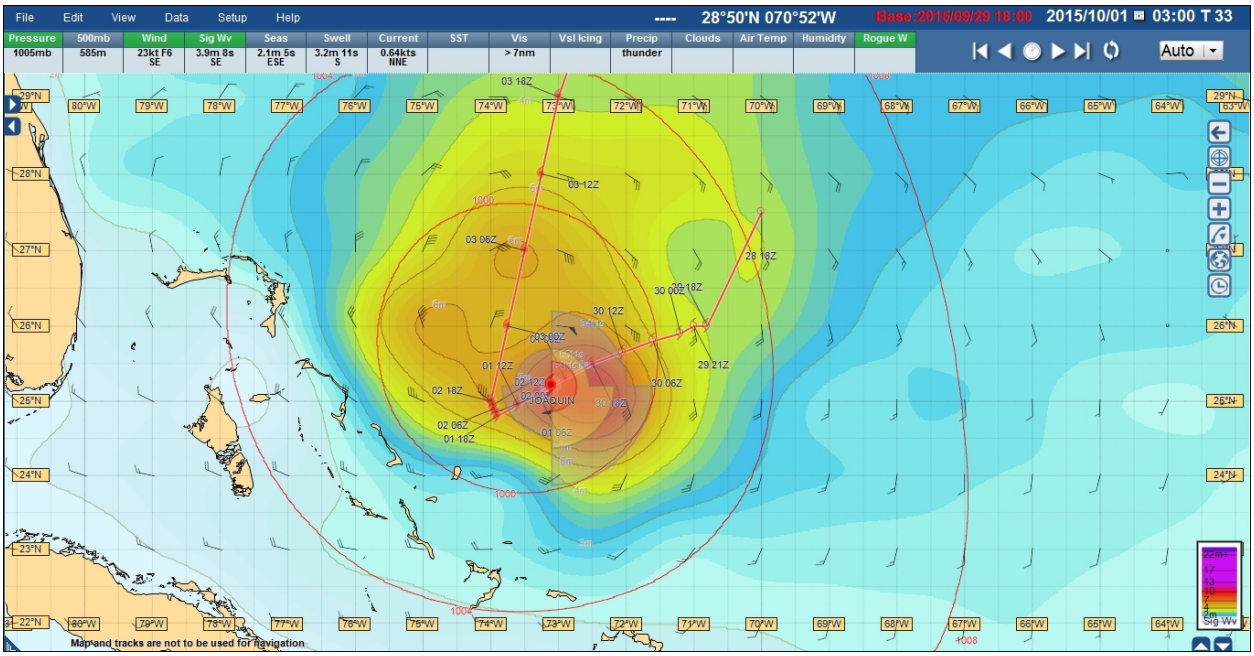


Figure I – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2300 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

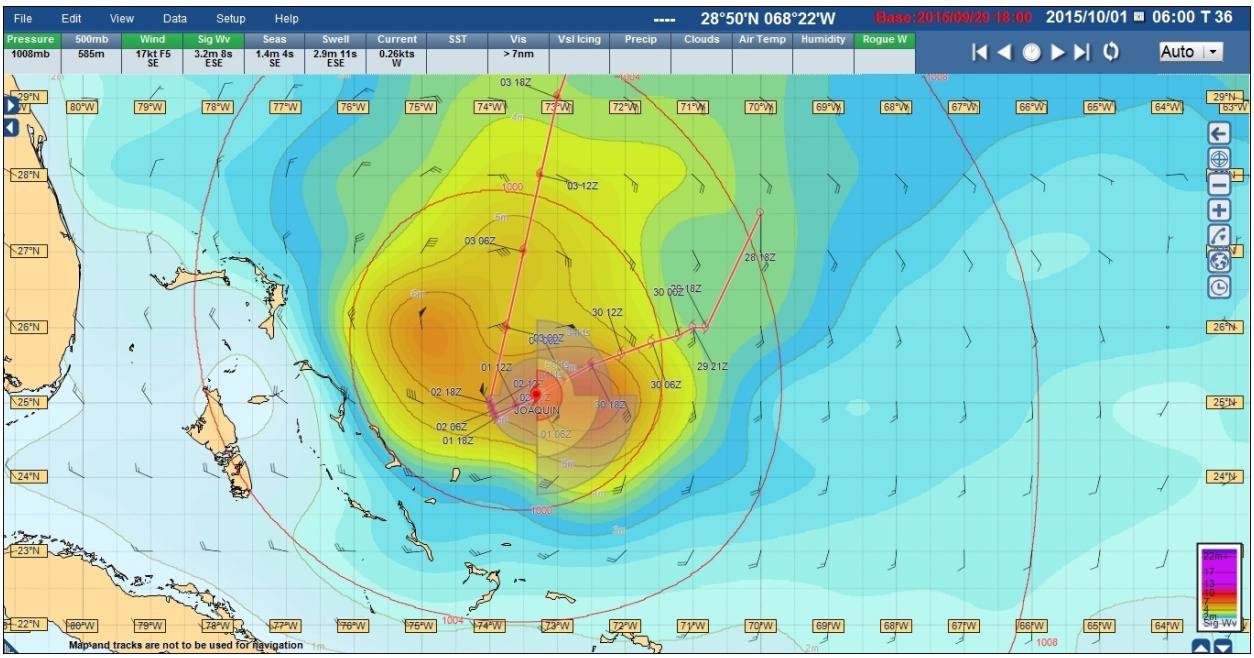


Figure J – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0200 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

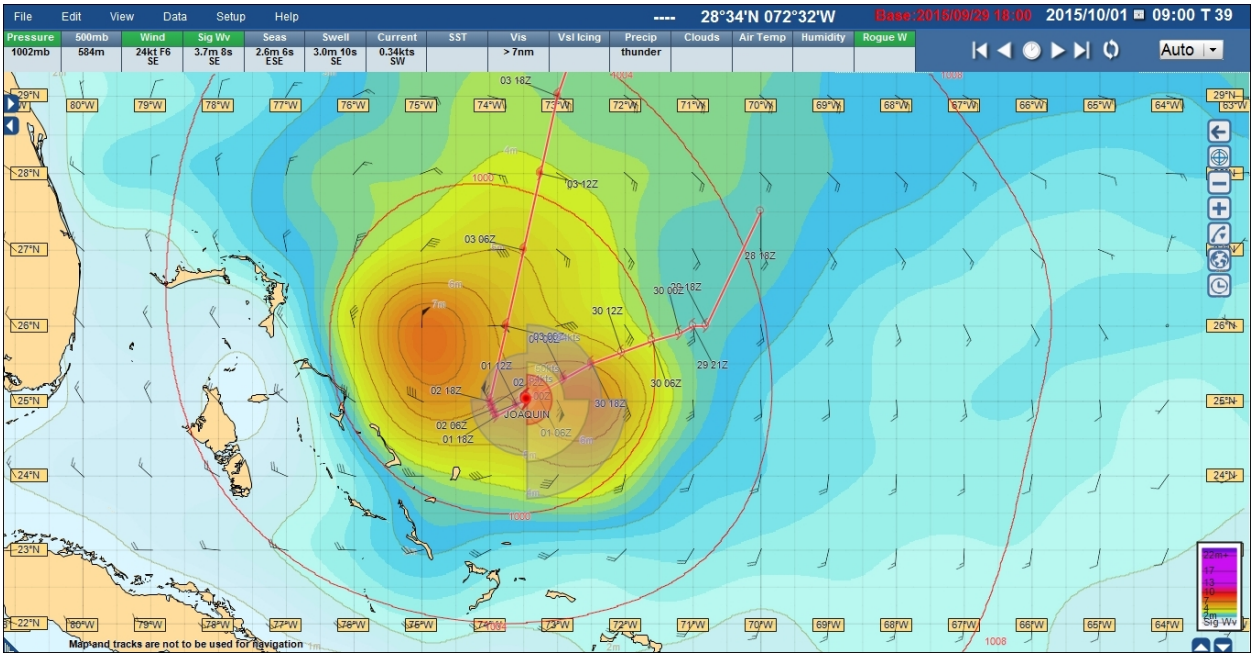


Figure K – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

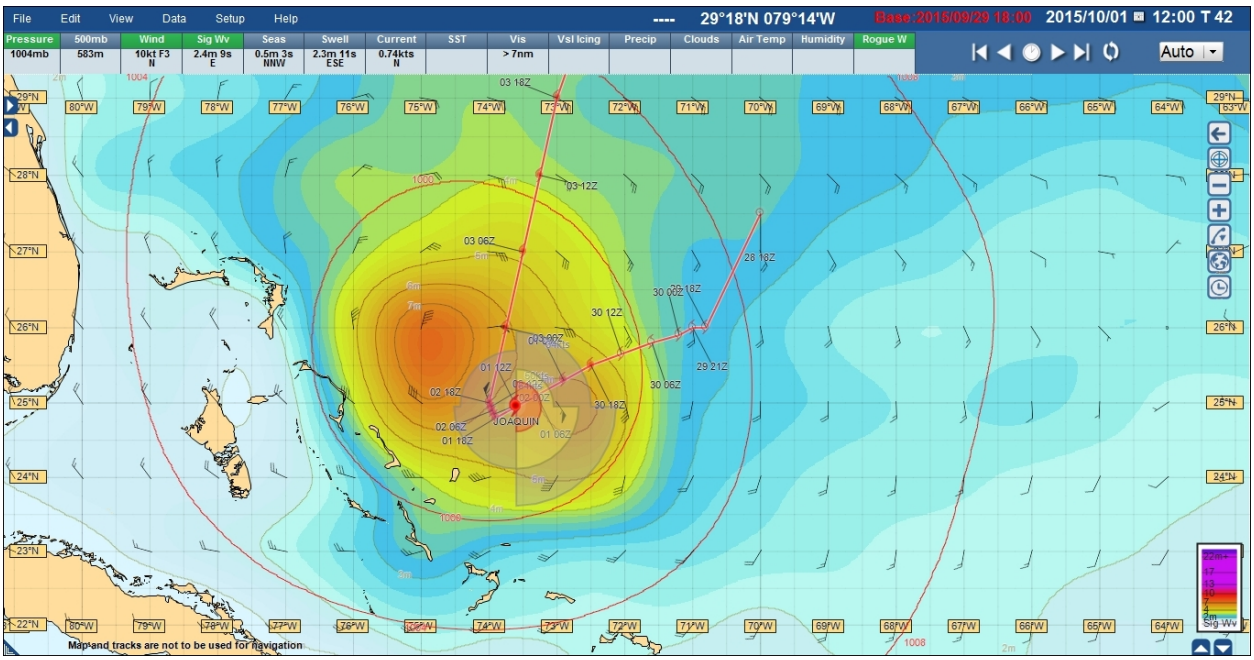
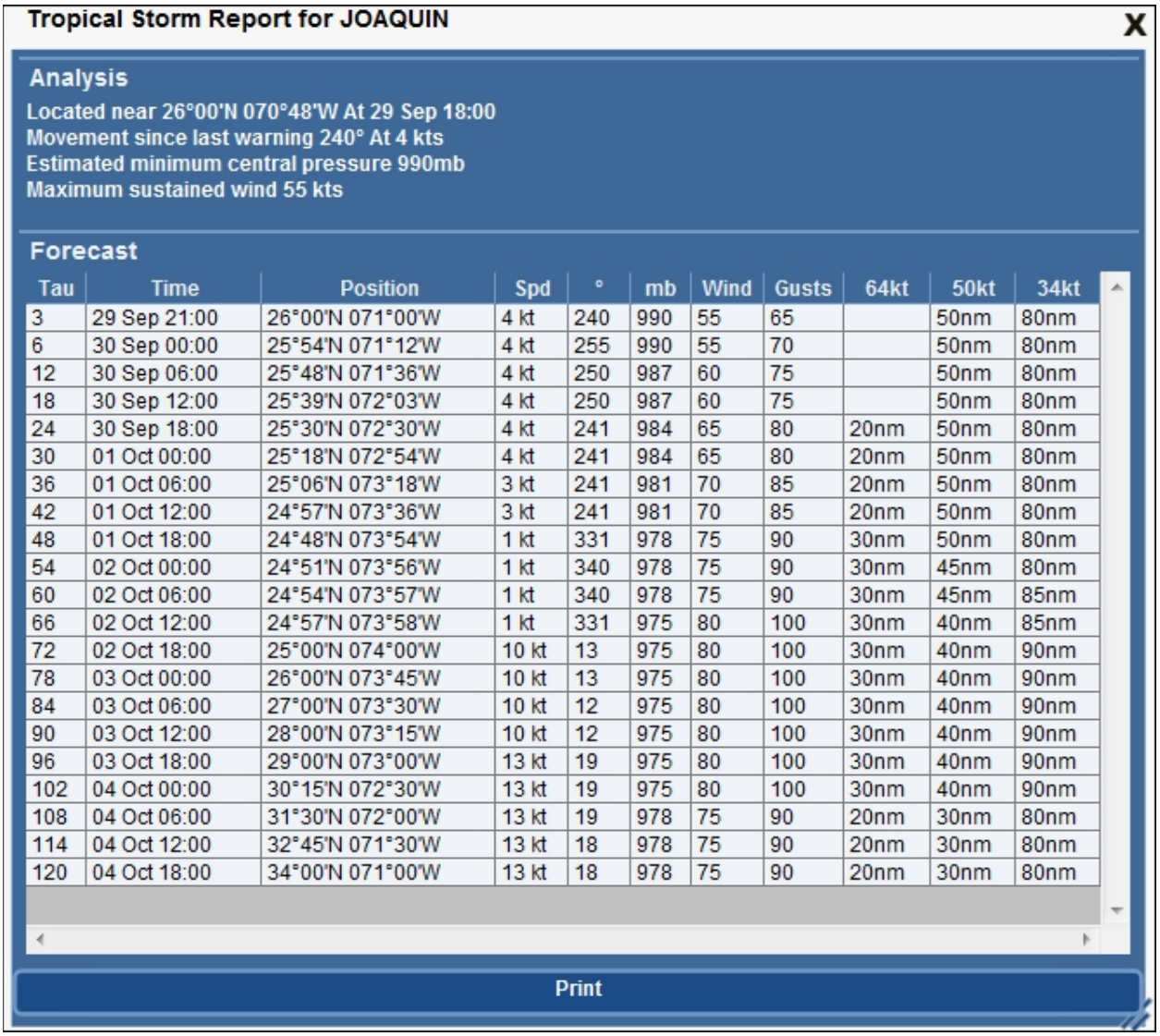


Figure L – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.



Tropical Storm Report for JOAQUIN

Analysis

Located near 26°00'N 070°48'W At 29 Sep 18:00
Movement since last warning 240° At 4 kts
Estimated minimum central pressure 990mb
Maximum sustained wind 55 kts

Forecast

Tau	Time	Position	Spd	°	mb	Wind	Gusts	64kt	50kt	34kt
3	29 Sep 21:00	26°00'N 071°00'W	4 kt	240	990	55	65		50nm	80nm
6	30 Sep 00:00	25°54'N 071°12'W	4 kt	255	990	55	70		50nm	80nm
12	30 Sep 06:00	25°48'N 071°36'W	4 kt	250	987	60	75		50nm	80nm
18	30 Sep 12:00	25°39'N 072°03'W	4 kt	250	987	60	75		50nm	80nm
24	30 Sep 18:00	25°30'N 072°30'W	4 kt	241	984	65	80	20nm	50nm	80nm
30	01 Oct 00:00	25°18'N 072°54'W	4 kt	241	984	65	80	20nm	50nm	80nm
36	01 Oct 06:00	25°06'N 073°18'W	3 kt	241	981	70	85	20nm	50nm	80nm
42	01 Oct 12:00	24°57'N 073°36'W	3 kt	241	981	70	85	20nm	50nm	80nm
48	01 Oct 18:00	24°48'N 073°54'W	1 kt	331	978	75	90	30nm	50nm	80nm
54	02 Oct 00:00	24°51'N 073°56'W	1 kt	340	978	75	90	30nm	45nm	80nm
60	02 Oct 06:00	24°54'N 073°57'W	1 kt	340	978	75	90	30nm	45nm	85nm
66	02 Oct 12:00	24°57'N 073°58'W	1 kt	331	975	80	100	30nm	40nm	85nm
72	02 Oct 18:00	25°00'N 074°00'W	10 kt	13	975	80	100	30nm	40nm	90nm
78	03 Oct 00:00	26°00'N 073°45'W	10 kt	13	975	80	100	30nm	40nm	90nm
84	03 Oct 06:00	27°00'N 073°30'W	10 kt	12	975	80	100	30nm	40nm	90nm
90	03 Oct 12:00	28°00'N 073°15'W	10 kt	12	975	80	100	30nm	40nm	90nm
96	03 Oct 18:00	29°00'N 073°00'W	13 kt	19	975	80	100	30nm	40nm	90nm
102	04 Oct 00:00	30°15'N 072°30'W	13 kt	19	975	80	100	30nm	40nm	90nm
108	04 Oct 06:00	31°30'N 072°00'W	13 kt	19	978	75	90	20nm	30nm	80nm
114	04 Oct 12:00	32°45'N 071°30'W	13 kt	18	978	75	90	20nm	30nm	80nm
120	04 Oct 18:00	34°00'N 071°00'W	13 kt	18	978	75	90	20nm	30nm	80nm

Print

Figure M – Screenshot of “Tropical Report” text box available in main BVS weather file emailed to *El Faro* about 2300 EDT on September 29, 2015.

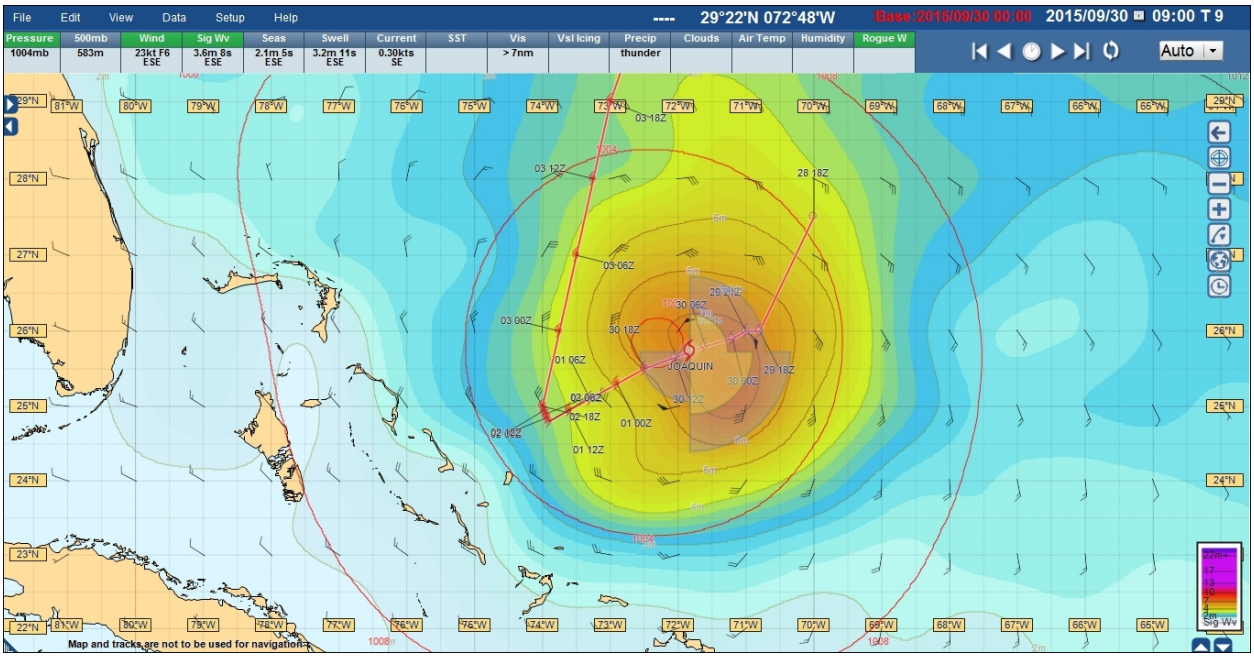


Figure N – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

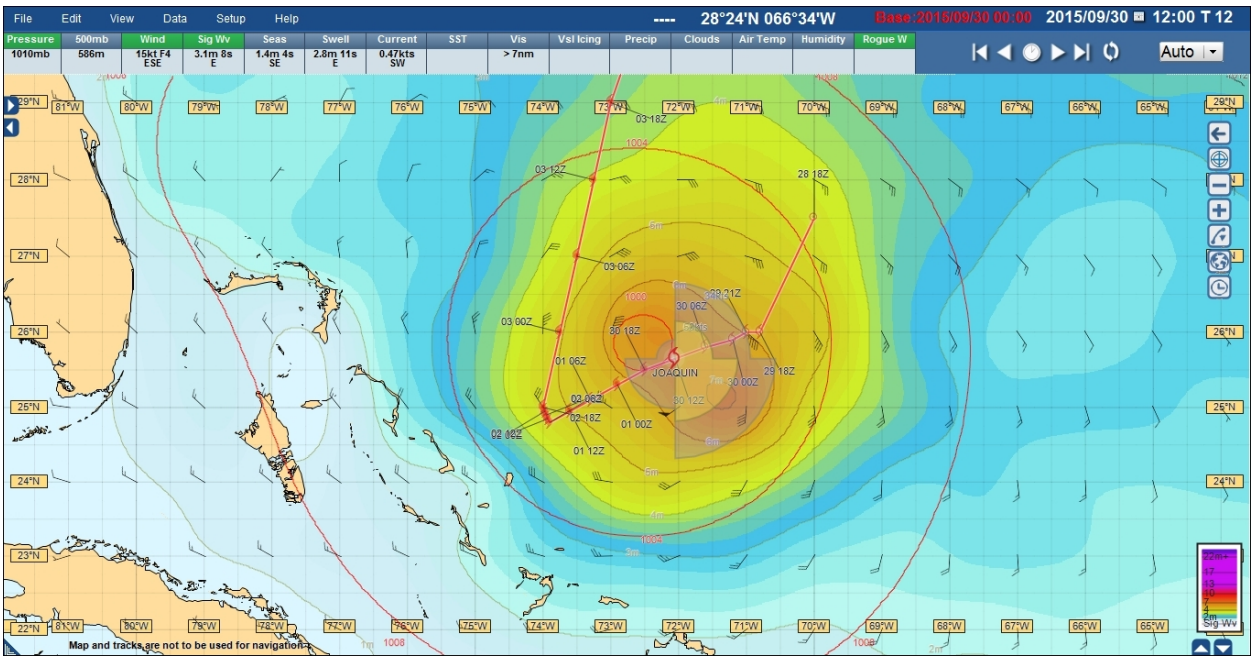


Figure O – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

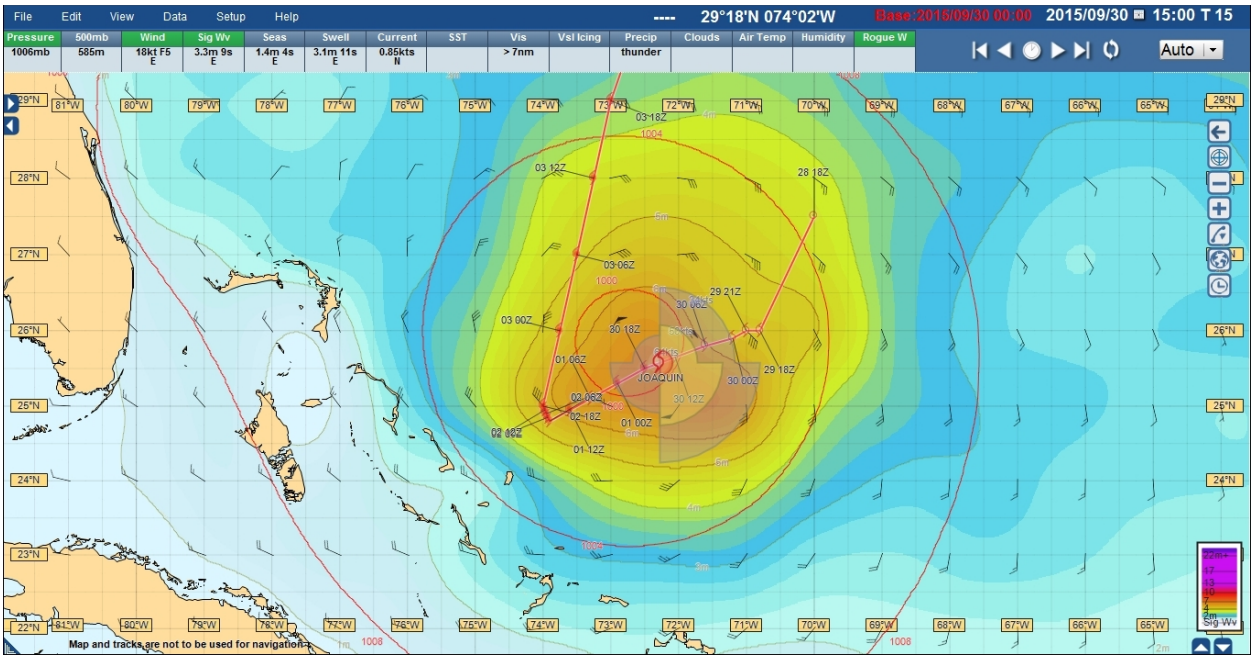


Figure P – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1100 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

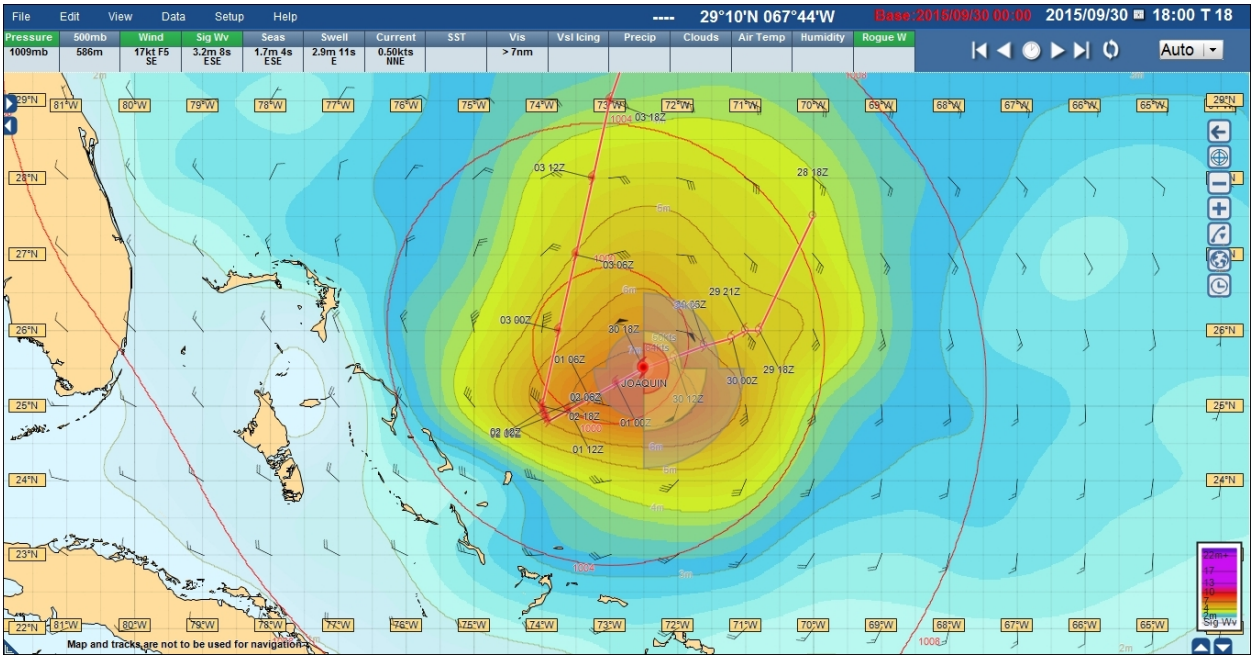


Figure Q – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1400 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

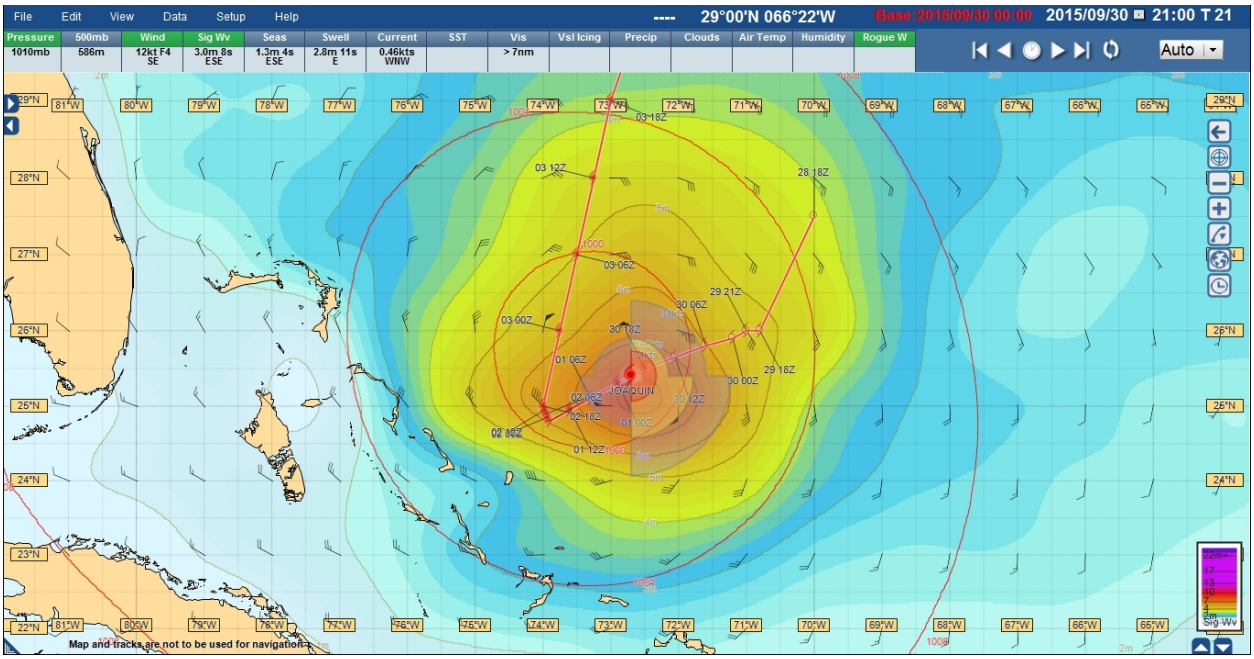


Figure R – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1700 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

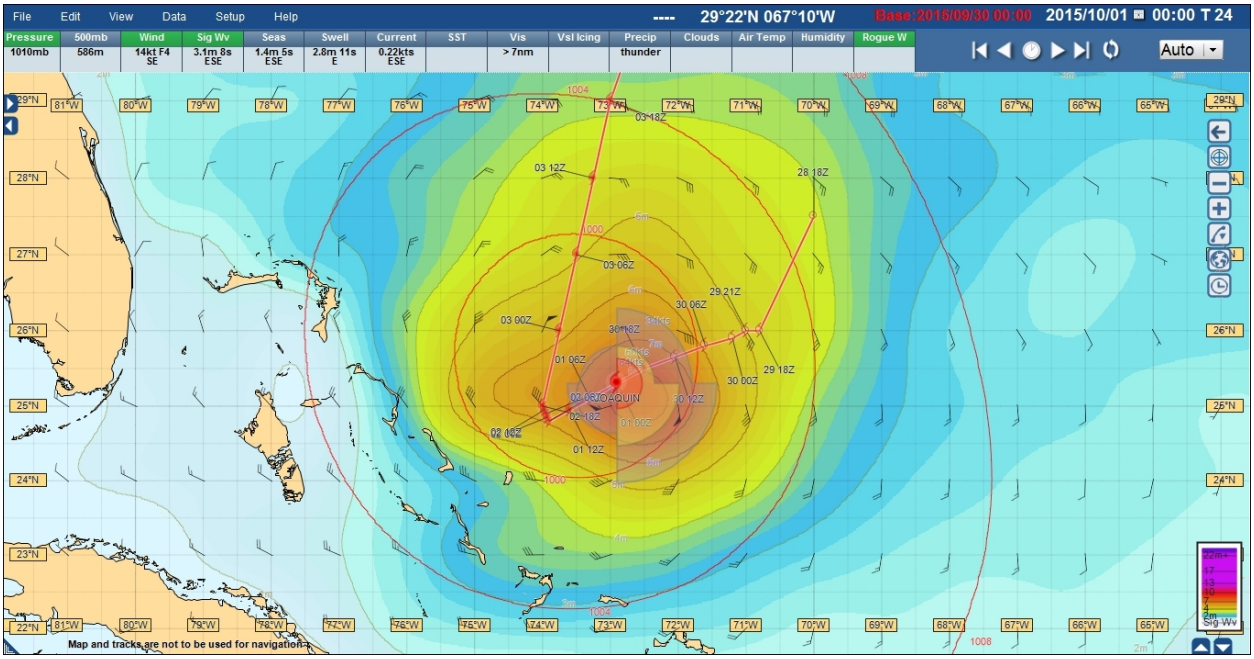


Figure S – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2000 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

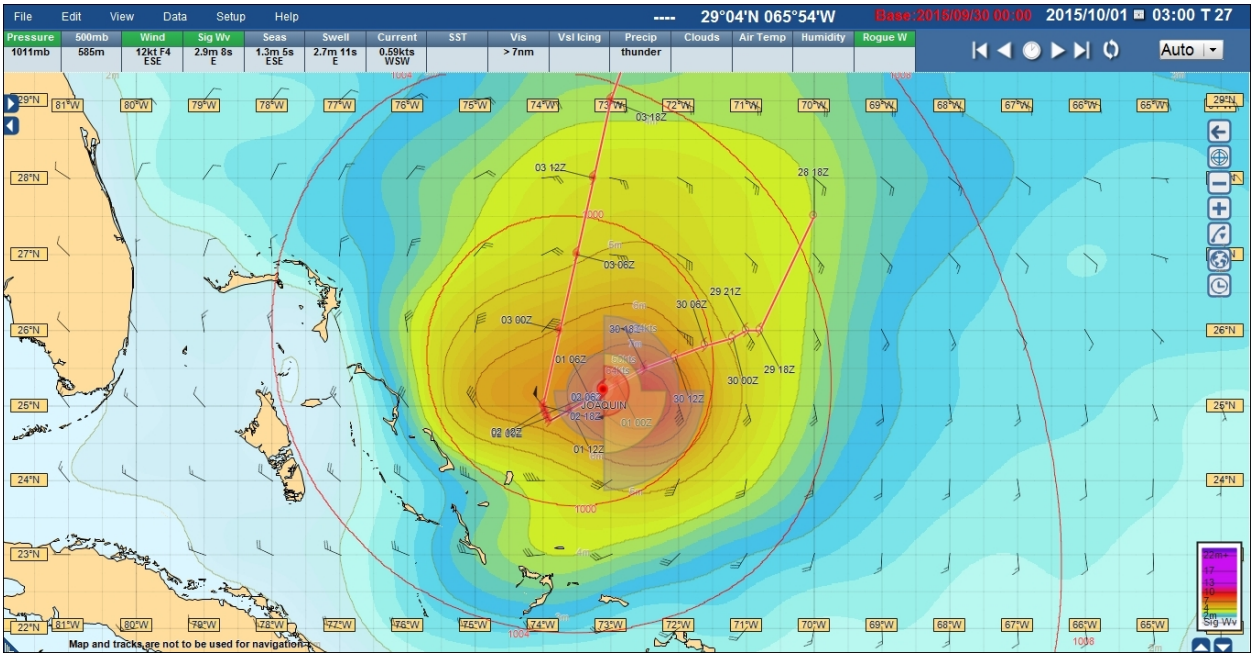


Figure T – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2300 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

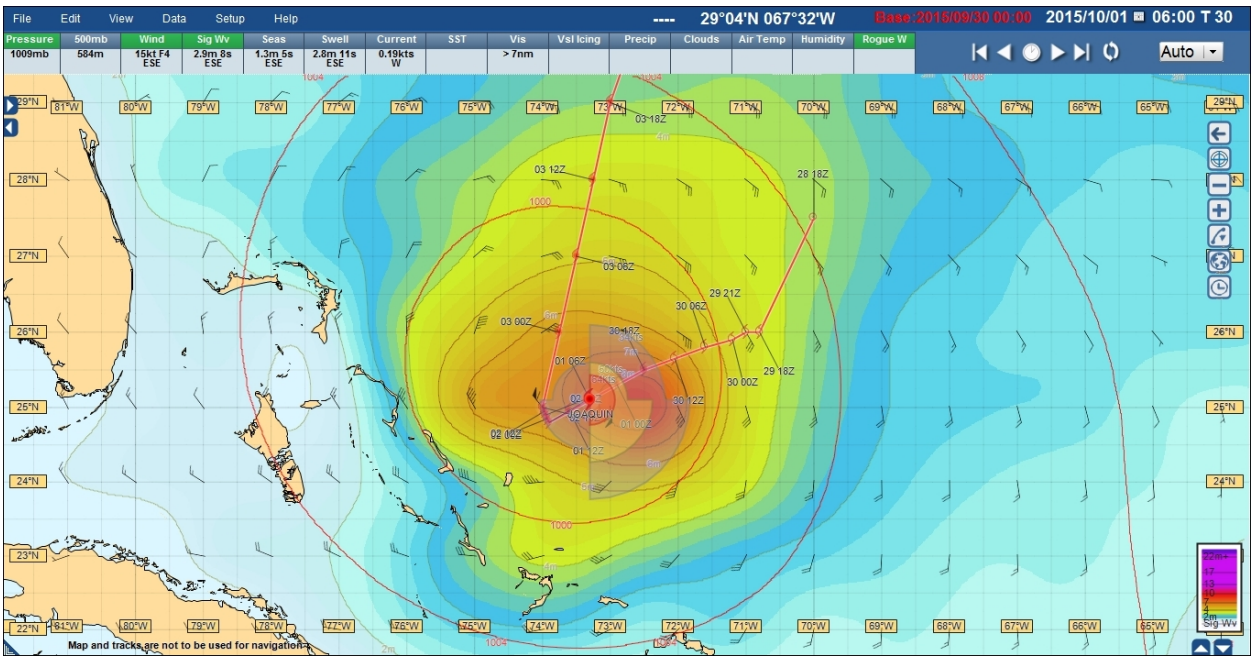


Figure U – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0200 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

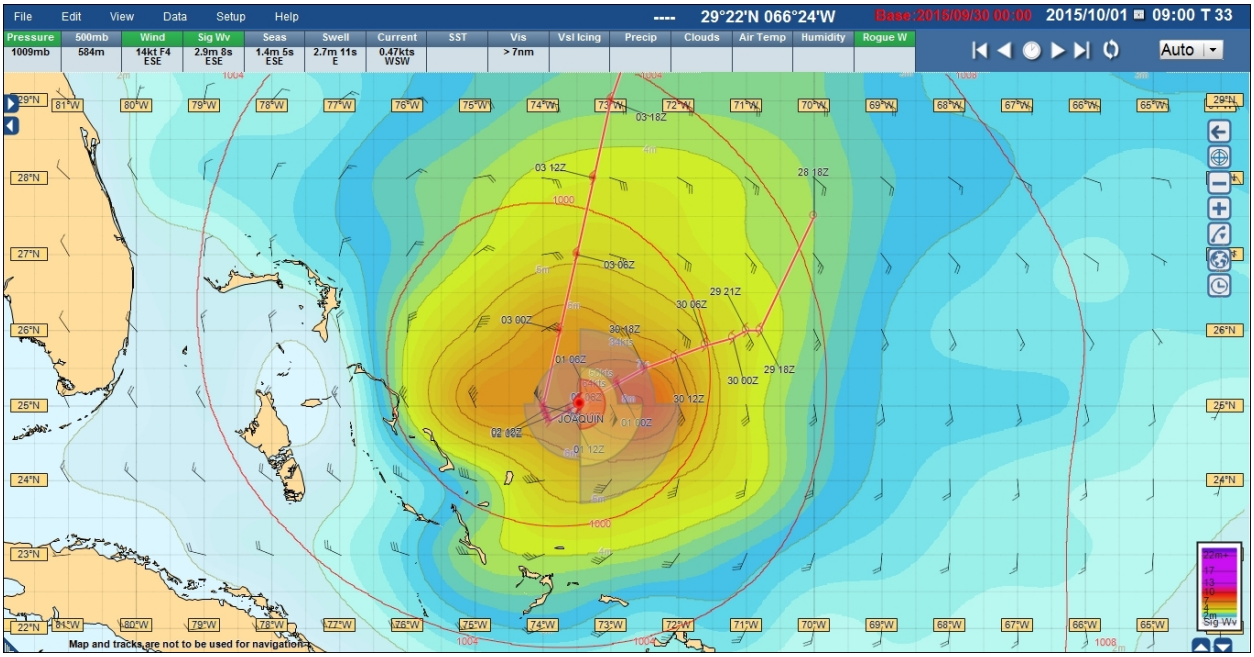


Figure V – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

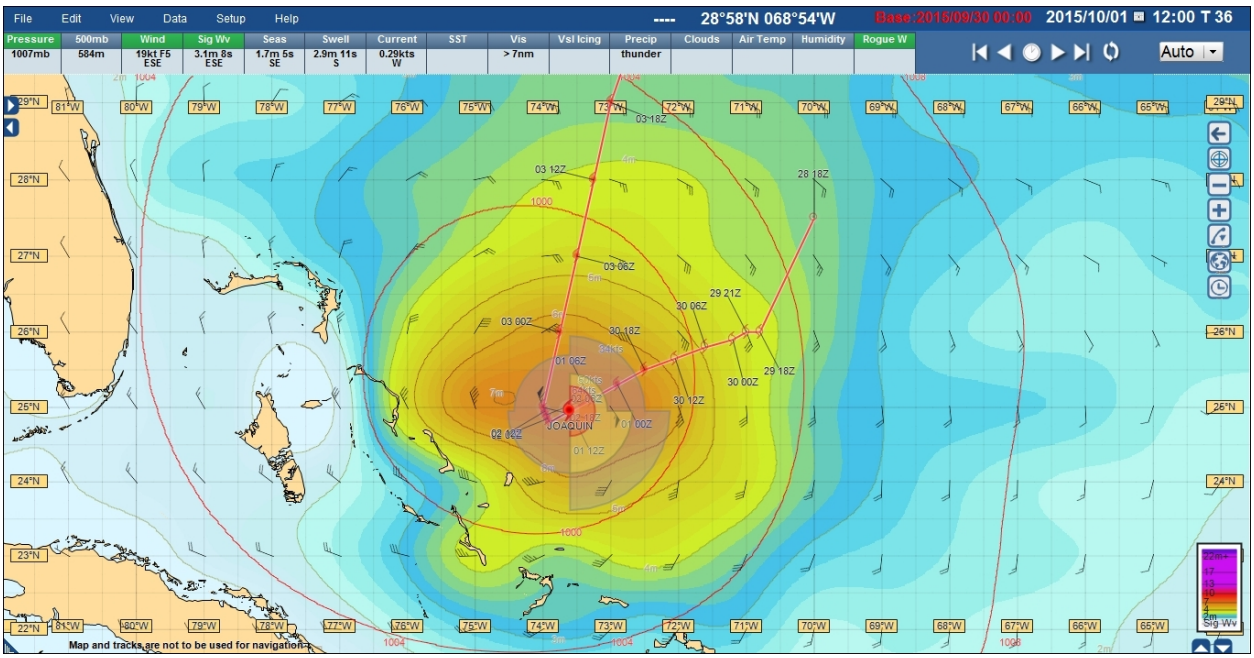
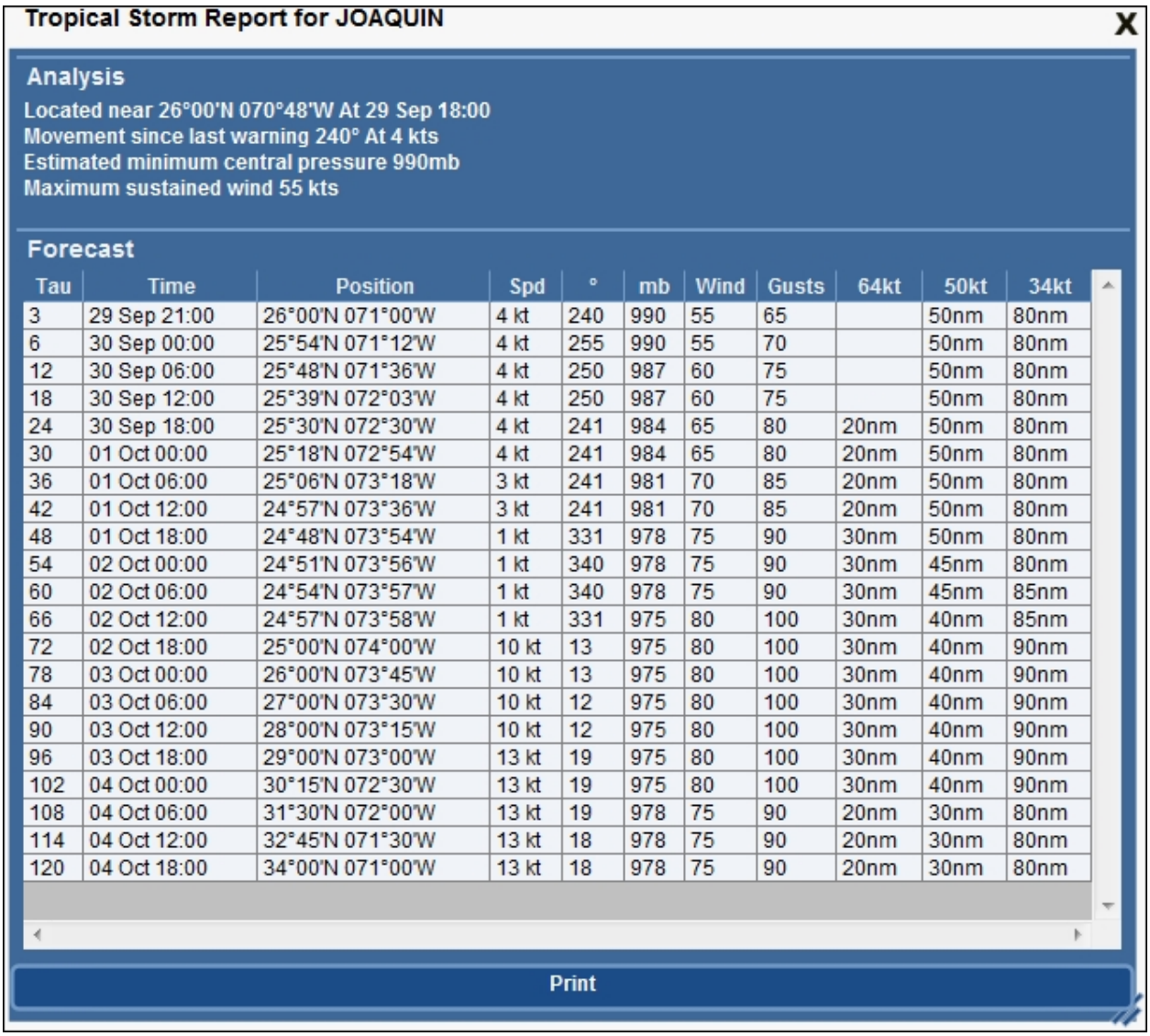


Figure W – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.



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Movement since last warning 240° At 4 kts
Estimated minimum central pressure 990mb
Maximum sustained wind 55 kts

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Print

Figure X – Screenshot of “Tropical Report” text box available in main BVS weather file emailed to *El Faro* about 0500 EDT on September 30, 2015.

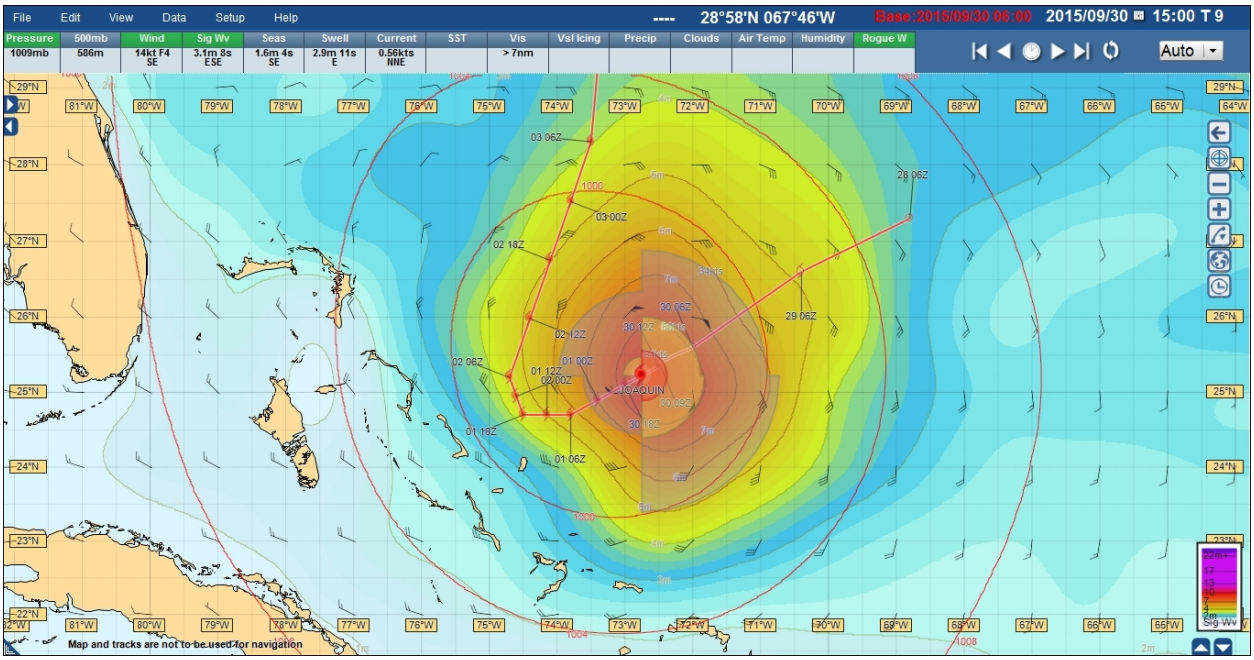


Figure Y – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1100 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

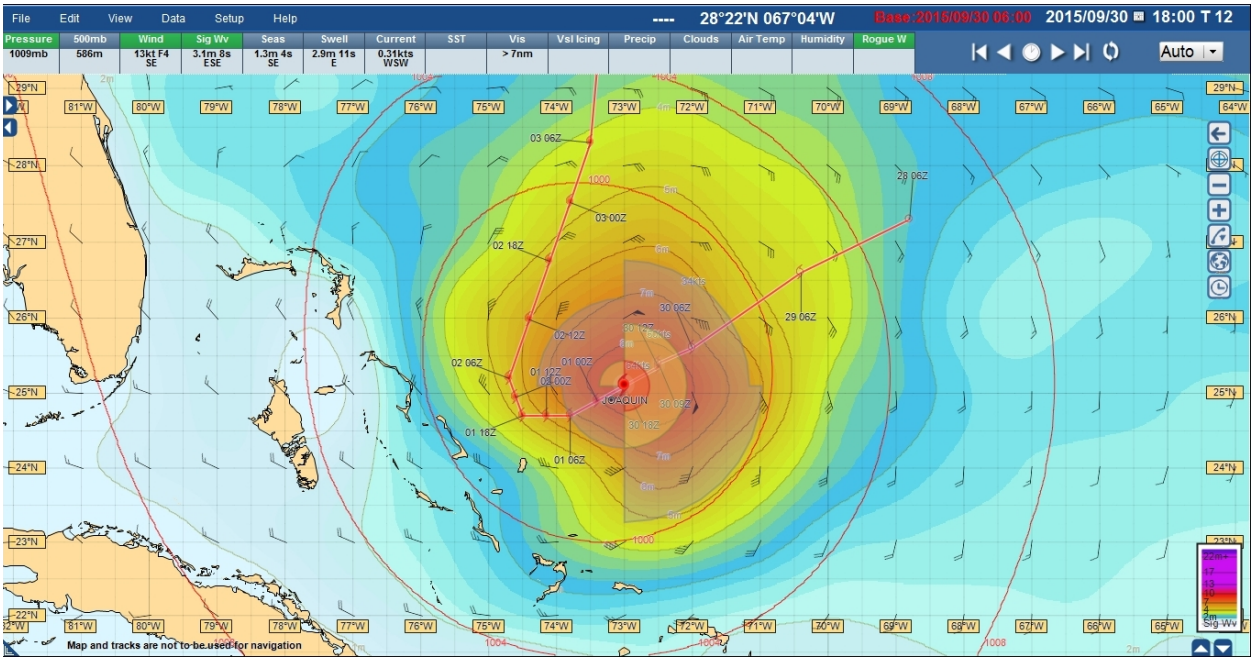


Figure Z – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1400 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

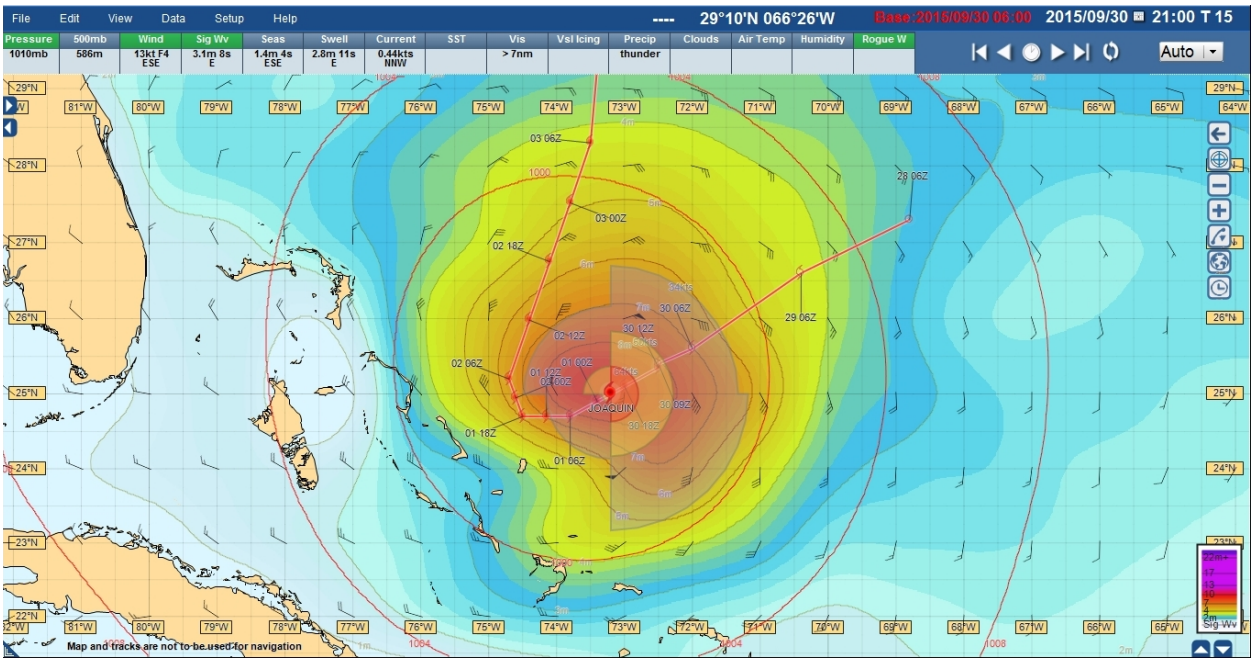


Figure AA – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1700 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

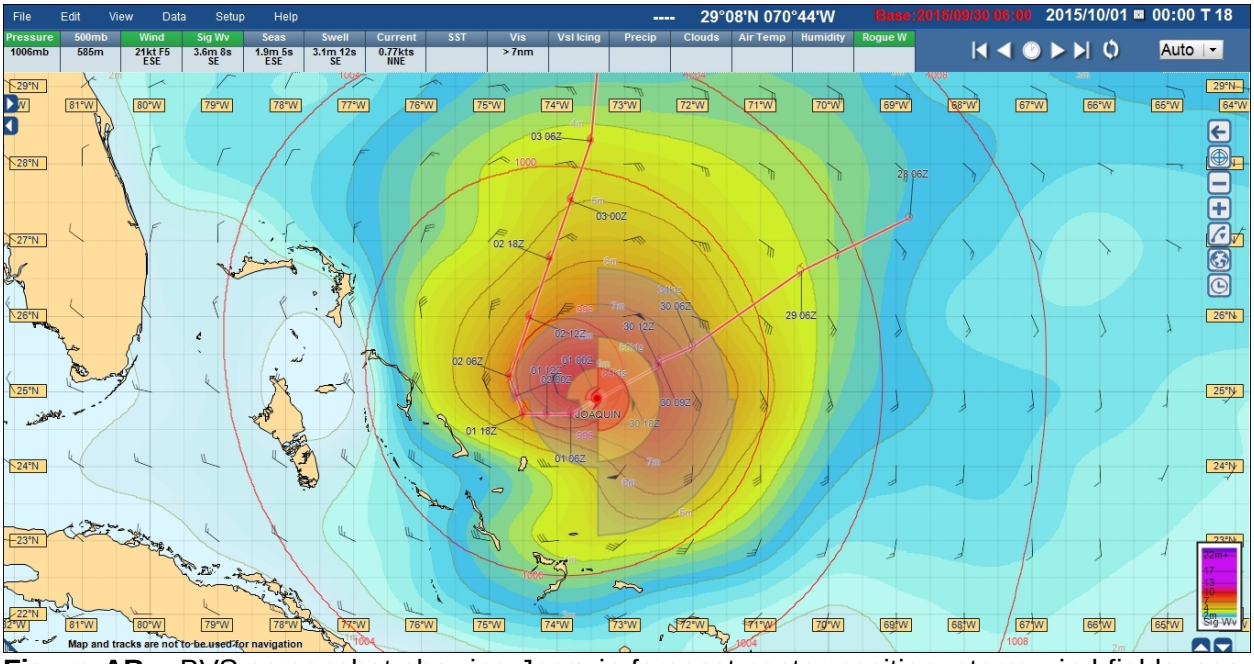


Figure AB – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2000 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

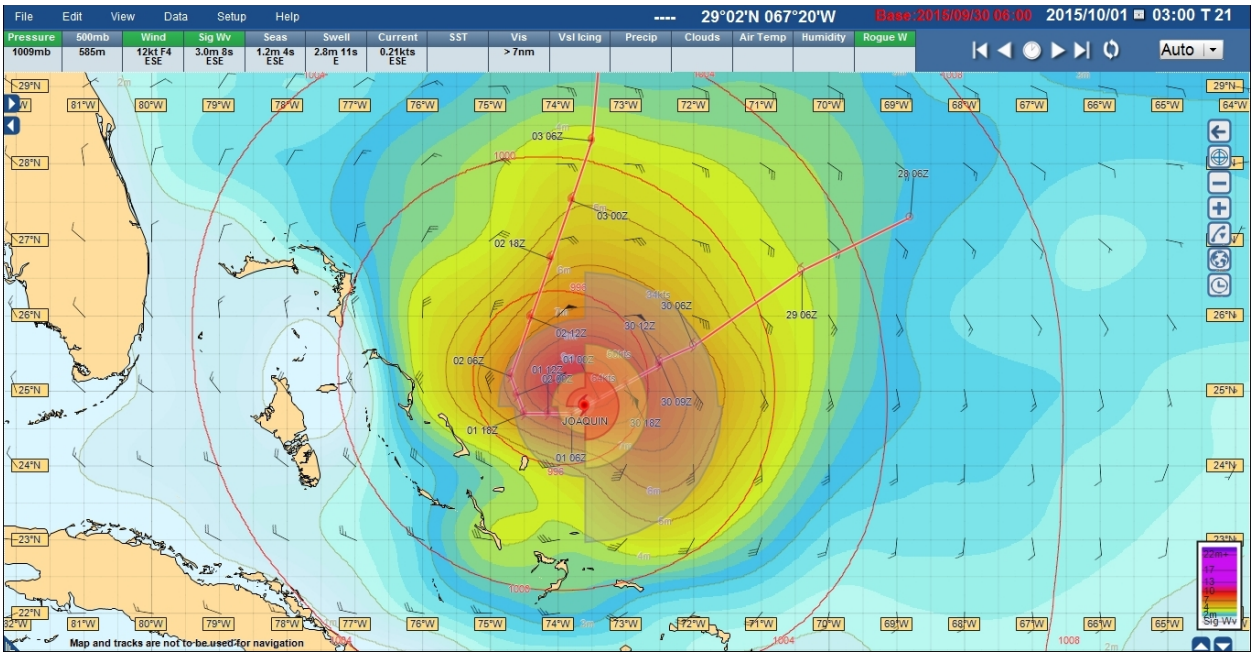


Figure AC – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2300 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

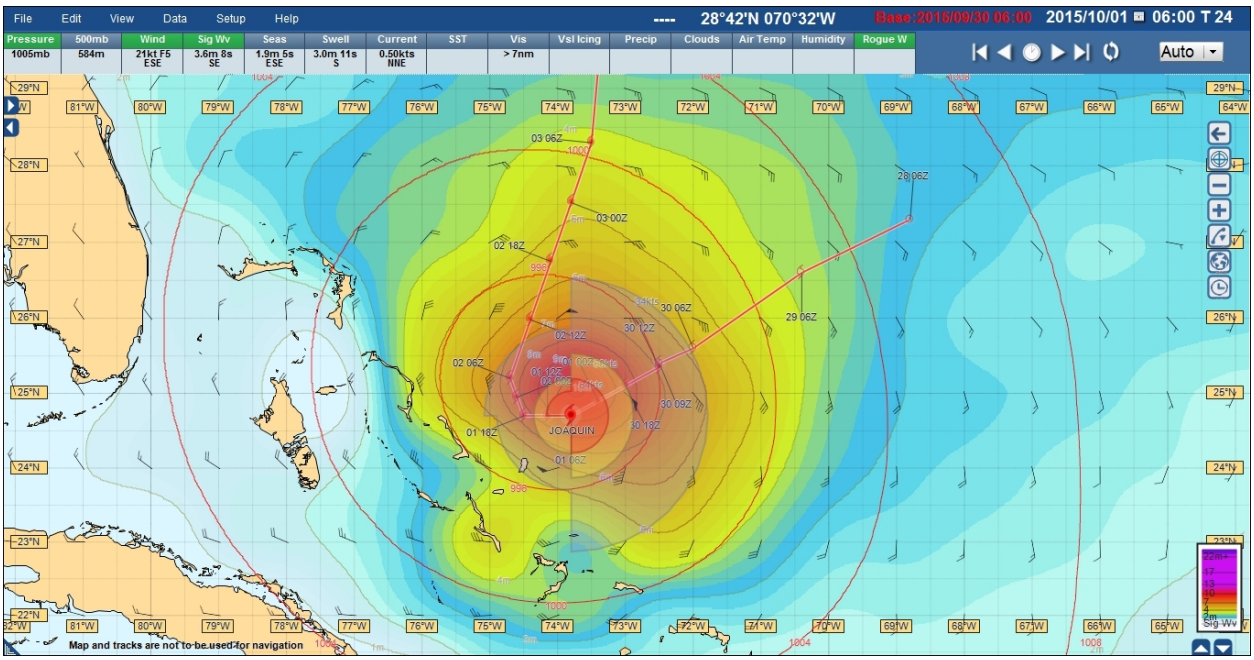


Figure AD – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0200 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

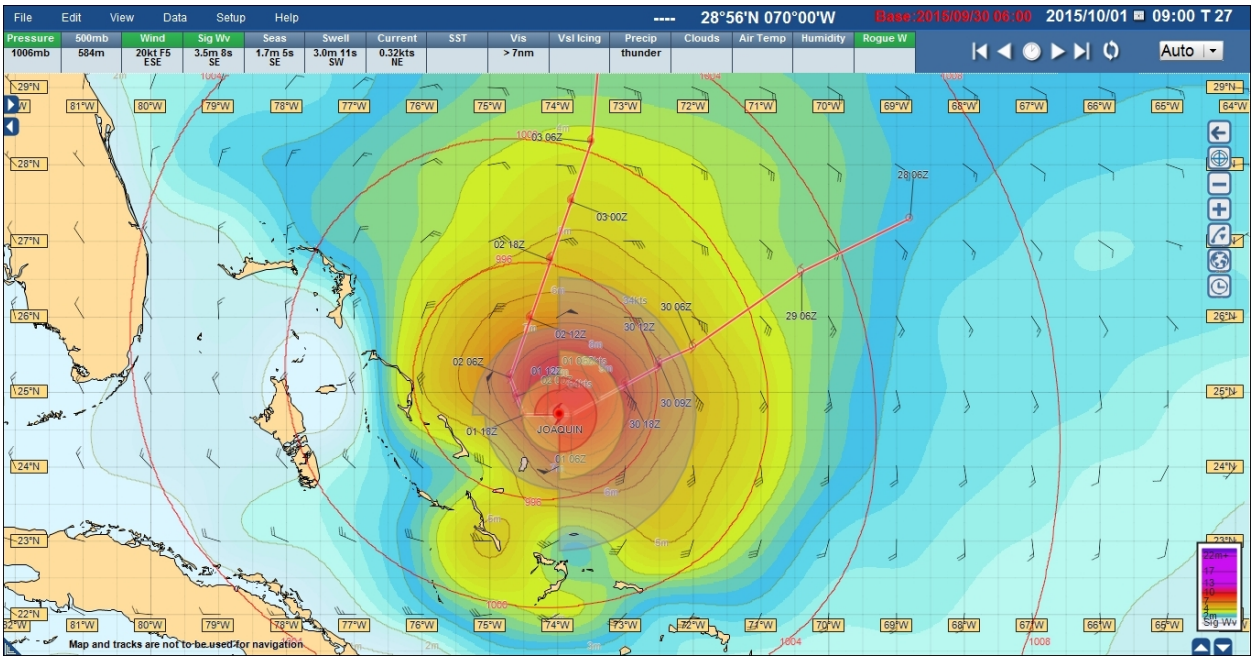


Figure AE – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

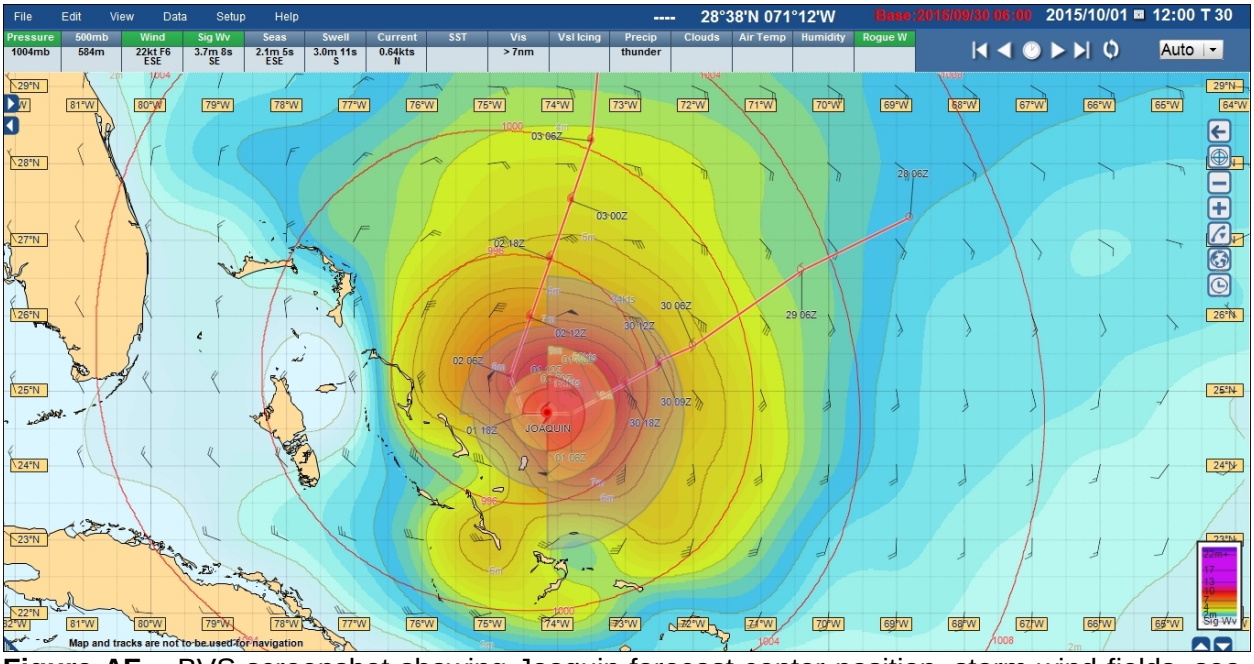
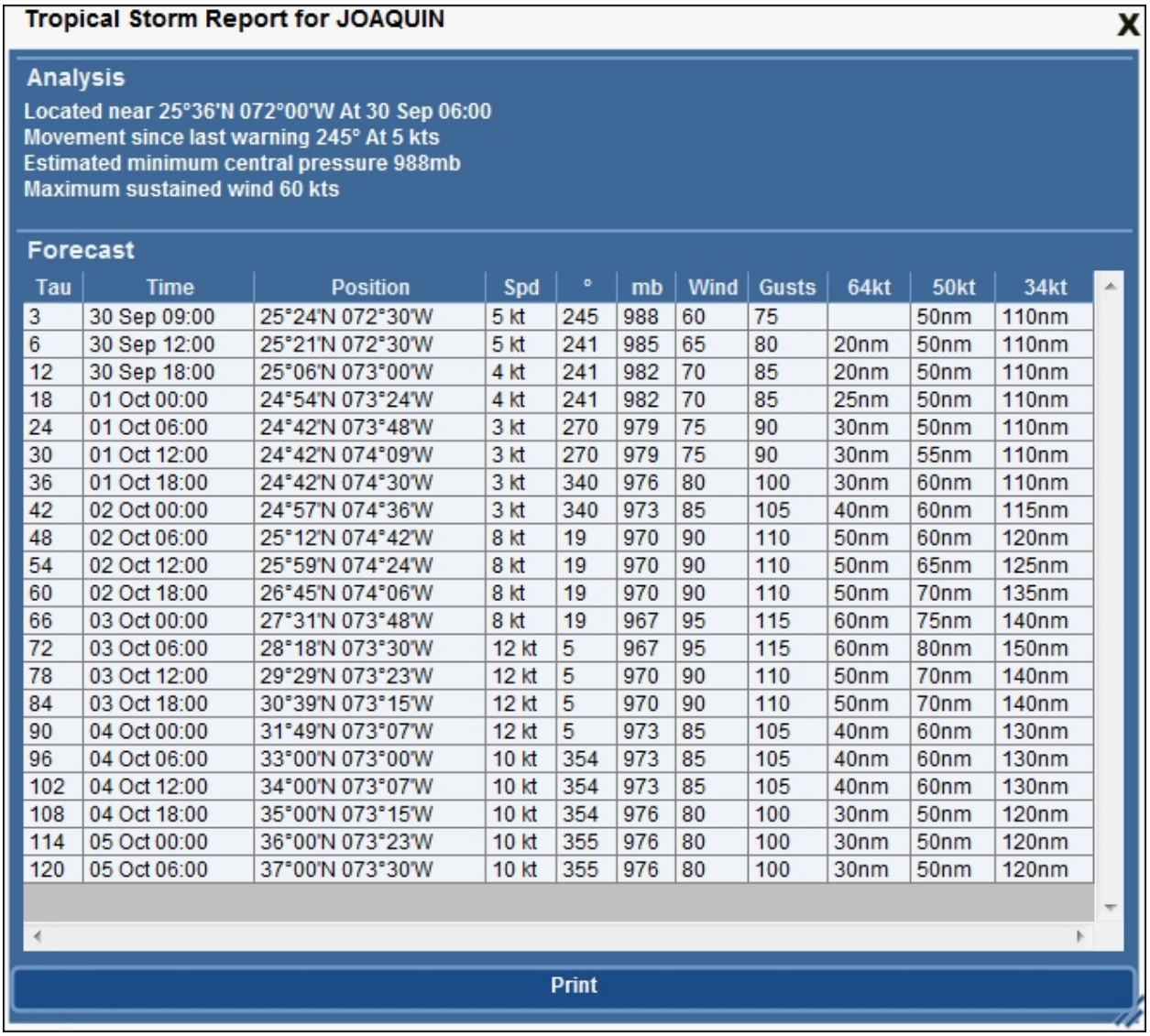


Figure AF – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.



Tropical Storm Report for JOAQUIN

Analysis

Located near 25°36'N 072°00'W At 30 Sep 06:00
Movement since last warning 245° At 5 kts
Estimated minimum central pressure 988mb
Maximum sustained wind 60 kts

Forecast

Tau	Time	Position	Spd	°	mb	Wind	Gusts	64kt	50kt	34kt
3	30 Sep 09:00	25°24'N 072°30'W	5 kt	245	988	60	75		50nm	110nm
6	30 Sep 12:00	25°21'N 072°30'W	5 kt	241	985	65	80	20nm	50nm	110nm
12	30 Sep 18:00	25°06'N 073°00'W	4 kt	241	982	70	85	20nm	50nm	110nm
18	01 Oct 00:00	24°54'N 073°24'W	4 kt	241	982	70	85	25nm	50nm	110nm
24	01 Oct 06:00	24°42'N 073°48'W	3 kt	270	979	75	90	30nm	50nm	110nm
30	01 Oct 12:00	24°42'N 074°09'W	3 kt	270	979	75	90	30nm	55nm	110nm
36	01 Oct 18:00	24°42'N 074°30'W	3 kt	340	976	80	100	30nm	60nm	110nm
42	02 Oct 00:00	24°57'N 074°36'W	3 kt	340	973	85	105	40nm	60nm	115nm
48	02 Oct 06:00	25°12'N 074°42'W	8 kt	19	970	90	110	50nm	60nm	120nm
54	02 Oct 12:00	25°59'N 074°24'W	8 kt	19	970	90	110	50nm	65nm	125nm
60	02 Oct 18:00	26°45'N 074°06'W	8 kt	19	970	90	110	50nm	70nm	135nm
66	03 Oct 00:00	27°31'N 073°48'W	8 kt	19	967	95	115	60nm	75nm	140nm
72	03 Oct 06:00	28°18'N 073°30'W	12 kt	5	967	95	115	60nm	80nm	150nm
78	03 Oct 12:00	29°29'N 073°23'W	12 kt	5	970	90	110	50nm	70nm	140nm
84	03 Oct 18:00	30°39'N 073°15'W	12 kt	5	970	90	110	50nm	70nm	140nm
90	04 Oct 00:00	31°49'N 073°07'W	12 kt	5	973	85	105	40nm	60nm	130nm
96	04 Oct 06:00	33°00'N 073°00'W	10 kt	354	973	85	105	40nm	60nm	130nm
102	04 Oct 12:00	34°00'N 073°07'W	10 kt	354	973	85	105	40nm	60nm	130nm
108	04 Oct 18:00	35°00'N 073°15'W	10 kt	354	976	80	100	30nm	50nm	120nm
114	05 Oct 00:00	36°00'N 073°23'W	10 kt	355	976	80	100	30nm	50nm	120nm
120	05 Oct 06:00	37°00'N 073°30'W	10 kt	355	976	80	100	30nm	50nm	120nm

Print

Figure AG – Screenshot of "Tropical Report" text box available in main BVS weather file emailed to *El Faro* about 1100 EDT on September 30, 2015.

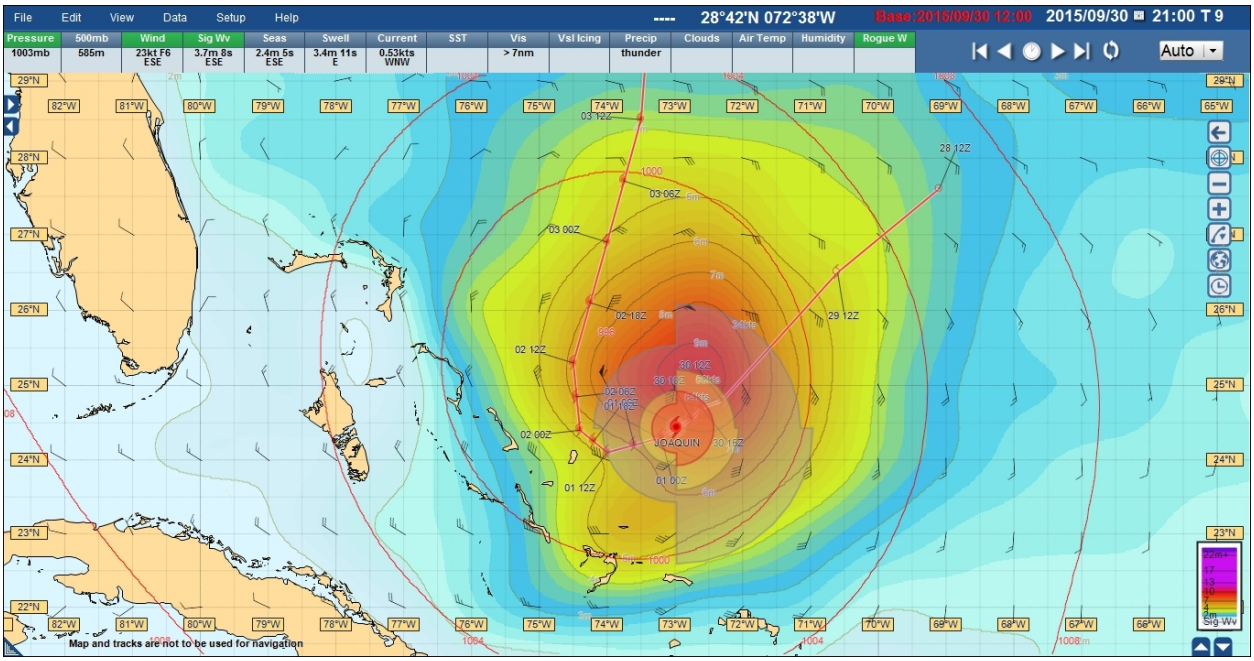


Figure AH – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 1700 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.

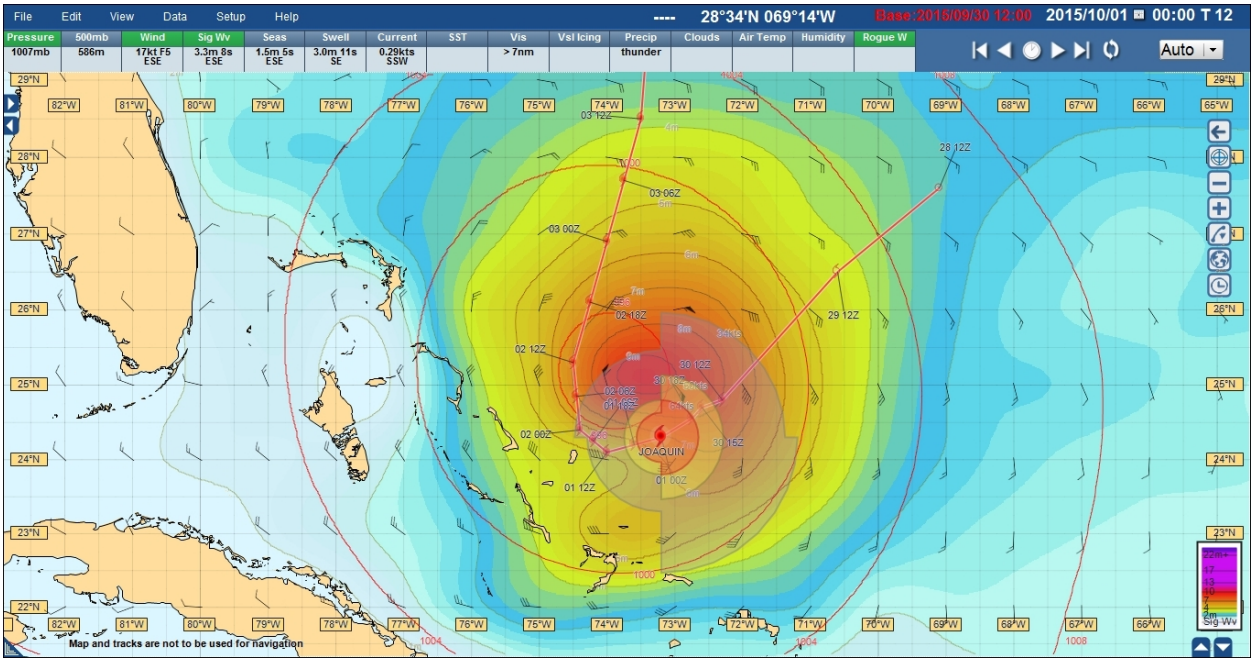


Figure AI – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2000 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.

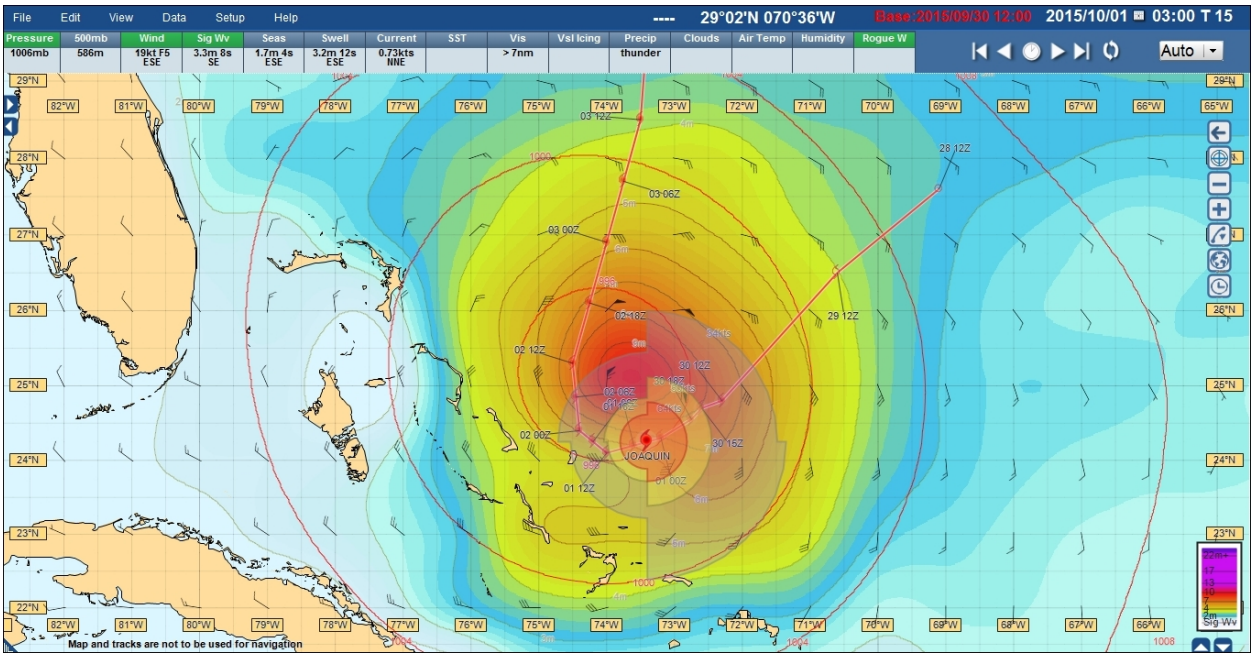


Figure AJ – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2300 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.

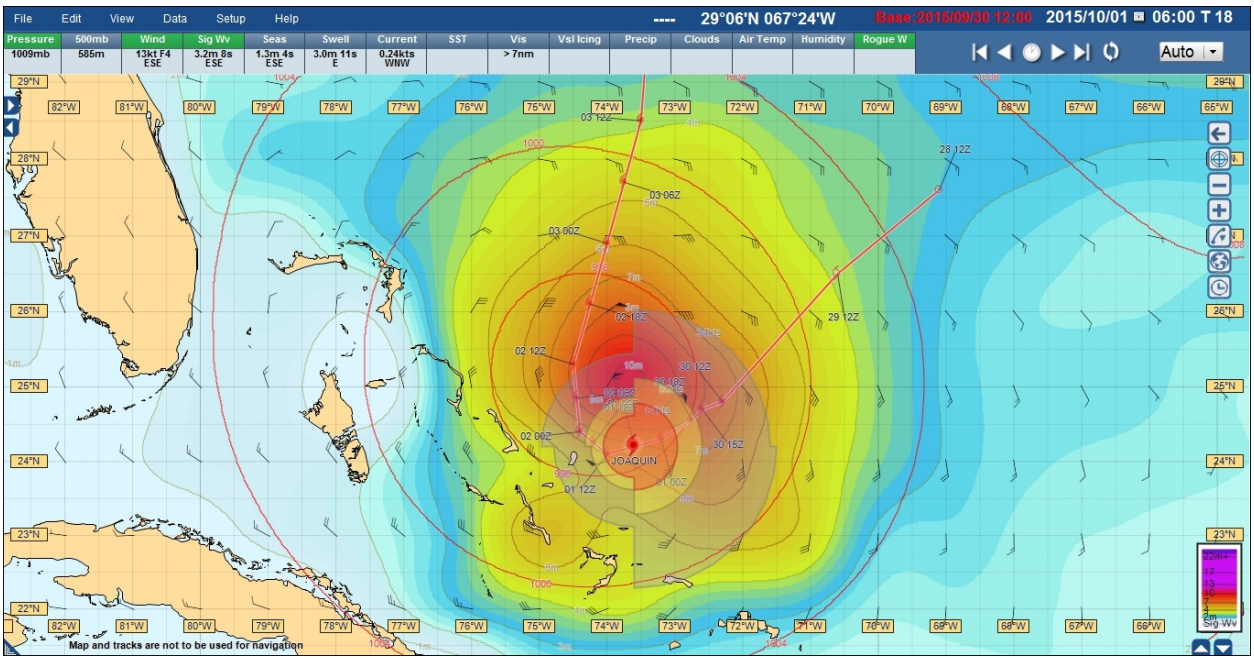


Figure AK – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0200 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.

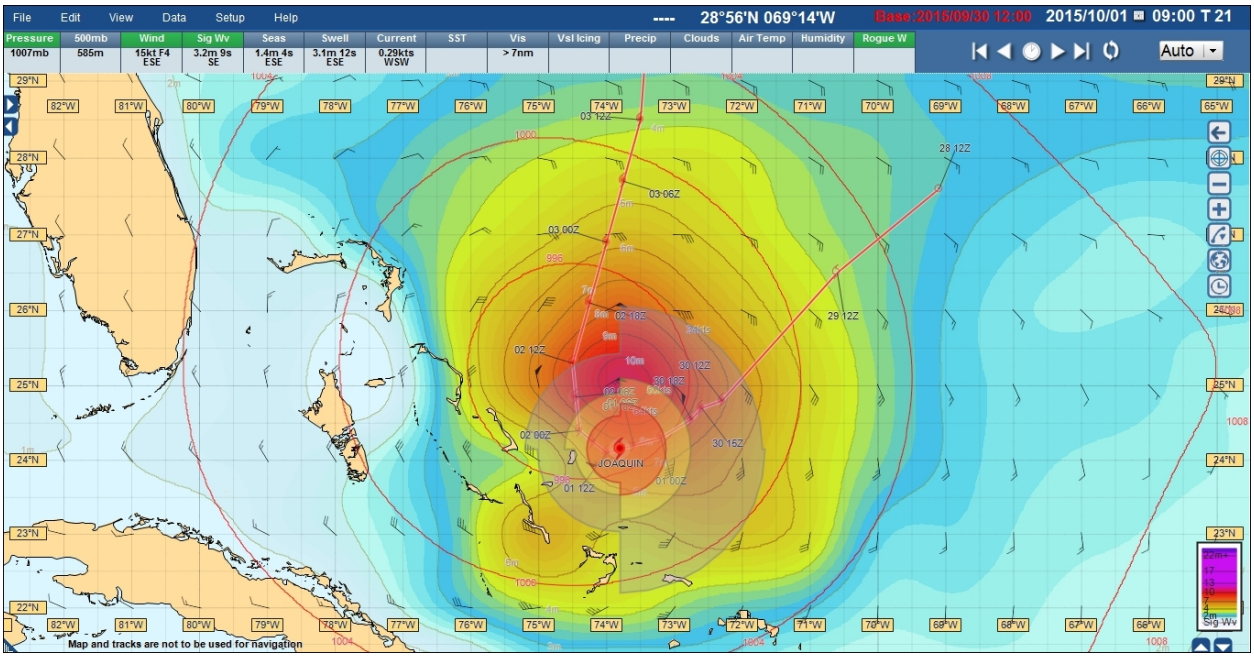


Figure AL – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.

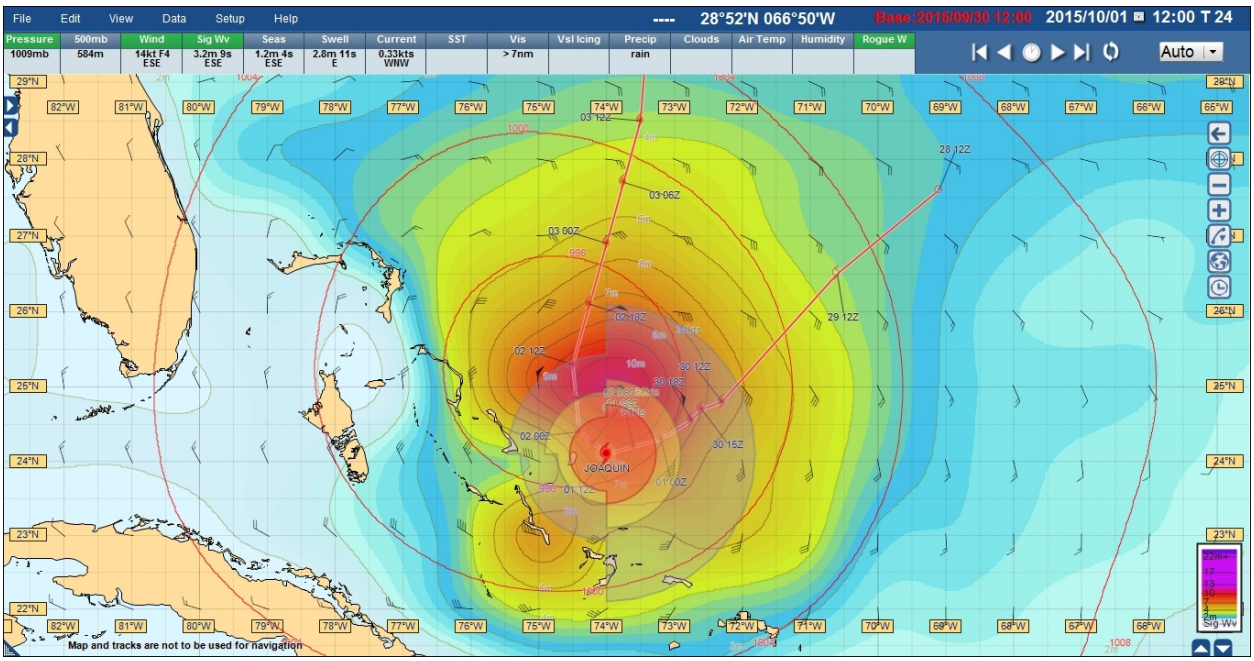
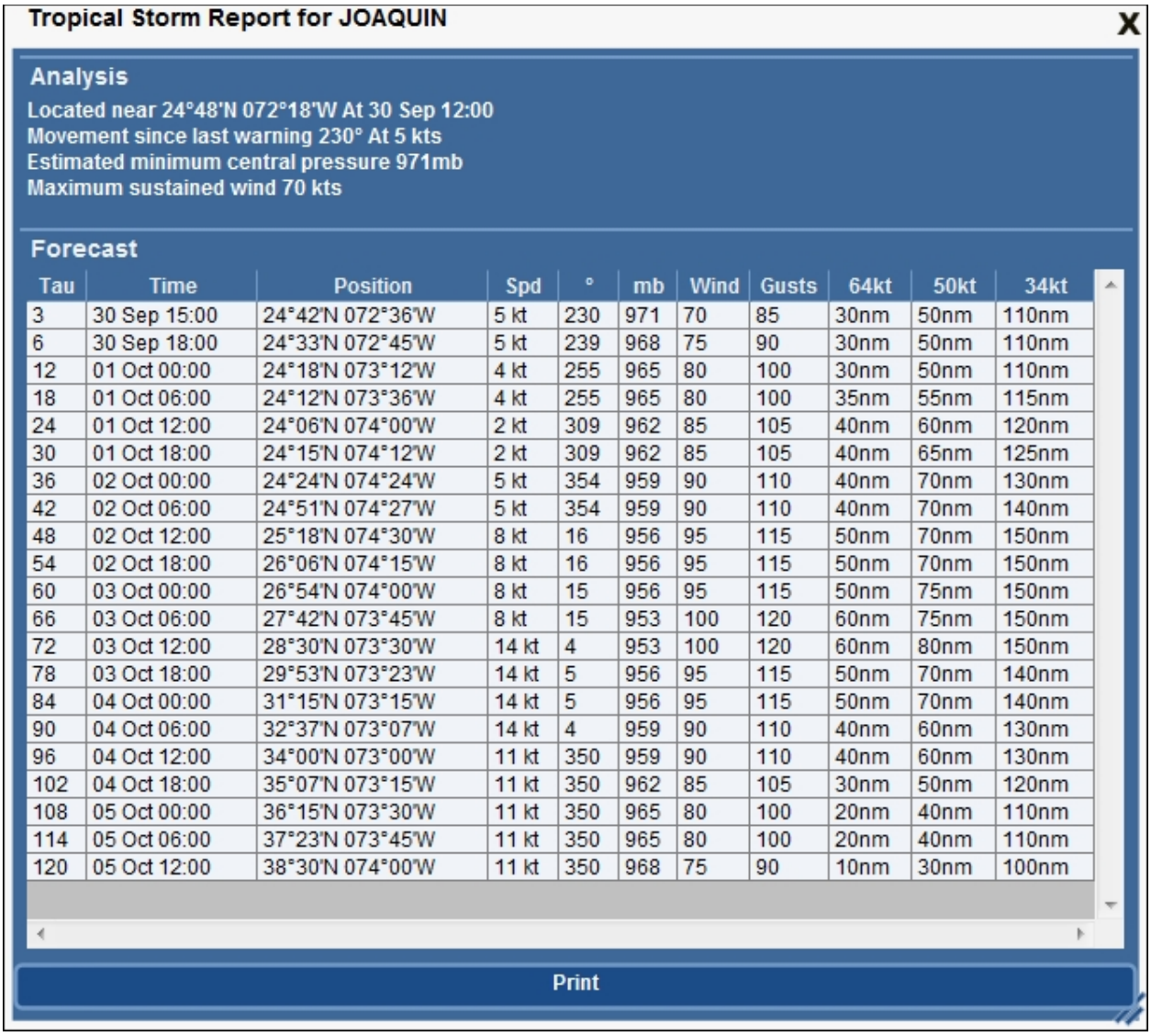


Figure AM – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.



Tropical Storm Report for JOAQUIN

Analysis

Located near 24°48'N 072°18'W At 30 Sep 12:00
Movement since last warning 230° At 5 kts
Estimated minimum central pressure 971mb
Maximum sustained wind 70 kts

Forecast

Tau	Time	Position	Spd	°	mb	Wind	Gusts	64kt	50kt	34kt
3	30 Sep 15:00	24°42'N 072°36'W	5 kt	230	971	70	85	30nm	50nm	110nm
6	30 Sep 18:00	24°33'N 072°45'W	5 kt	239	968	75	90	30nm	50nm	110nm
12	01 Oct 00:00	24°18'N 073°12'W	4 kt	255	965	80	100	30nm	50nm	110nm
18	01 Oct 06:00	24°12'N 073°36'W	4 kt	255	965	80	100	35nm	55nm	115nm
24	01 Oct 12:00	24°06'N 074°00'W	2 kt	309	962	85	105	40nm	60nm	120nm
30	01 Oct 18:00	24°15'N 074°12'W	2 kt	309	962	85	105	40nm	65nm	125nm
36	02 Oct 00:00	24°24'N 074°24'W	5 kt	354	959	90	110	40nm	70nm	130nm
42	02 Oct 06:00	24°51'N 074°27'W	5 kt	354	959	90	110	40nm	70nm	140nm
48	02 Oct 12:00	25°18'N 074°30'W	8 kt	16	956	95	115	50nm	70nm	150nm
54	02 Oct 18:00	26°06'N 074°15'W	8 kt	16	956	95	115	50nm	70nm	150nm
60	03 Oct 00:00	26°54'N 074°00'W	8 kt	15	956	95	115	50nm	75nm	150nm
66	03 Oct 06:00	27°42'N 073°45'W	8 kt	15	953	100	120	60nm	75nm	150nm
72	03 Oct 12:00	28°30'N 073°30'W	14 kt	4	953	100	120	60nm	80nm	150nm
78	03 Oct 18:00	29°53'N 073°23'W	14 kt	5	956	95	115	50nm	70nm	140nm
84	04 Oct 00:00	31°15'N 073°15'W	14 kt	5	956	95	115	50nm	70nm	140nm
90	04 Oct 06:00	32°37'N 073°07'W	14 kt	4	959	90	110	40nm	60nm	130nm
96	04 Oct 12:00	34°00'N 073°00'W	11 kt	350	959	90	110	40nm	60nm	130nm
102	04 Oct 18:00	35°07'N 073°15'W	11 kt	350	962	85	105	30nm	50nm	120nm
108	05 Oct 00:00	36°15'N 073°30'W	11 kt	350	965	80	100	20nm	40nm	110nm
114	05 Oct 06:00	37°23'N 073°45'W	11 kt	350	965	80	100	20nm	40nm	110nm
120	05 Oct 12:00	38°30'N 074°00'W	11 kt	350	968	75	90	10nm	30nm	100nm

Print

Figure AN – Screenshot of "Tropical Report" text box available in main BVS weather file emailed to *El Faro* about 1700 EDT on September 30, 2015.

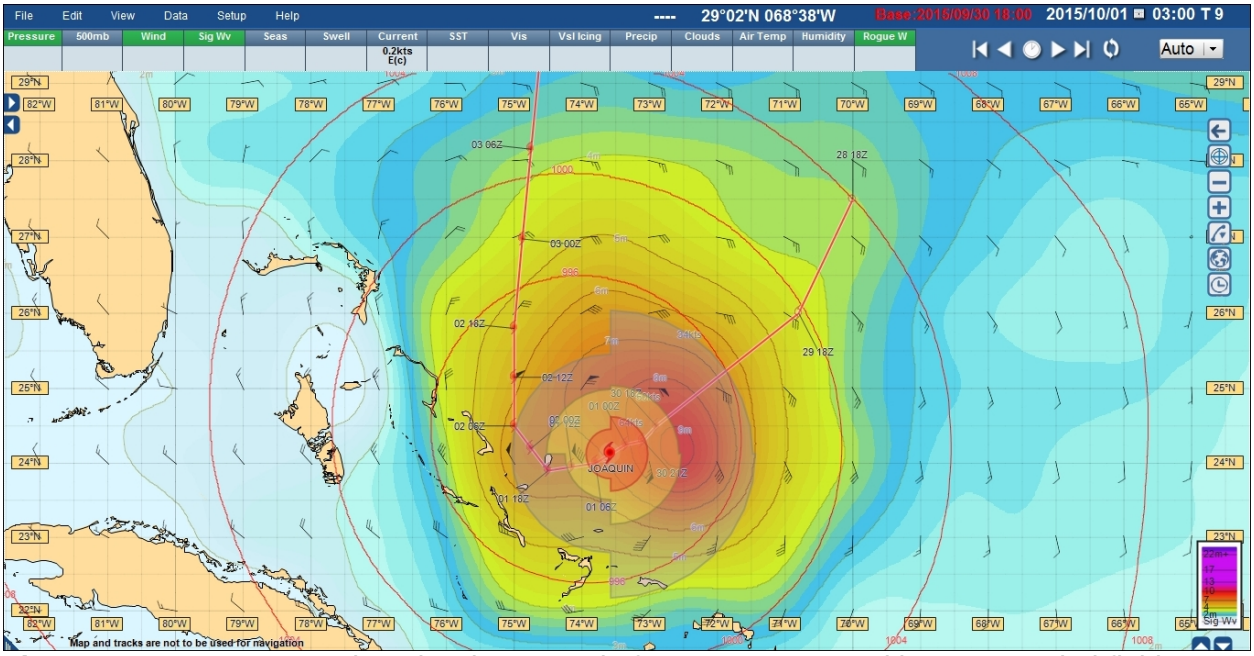


Figure AO – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 2300 EDT on September 30, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 30, 2015.

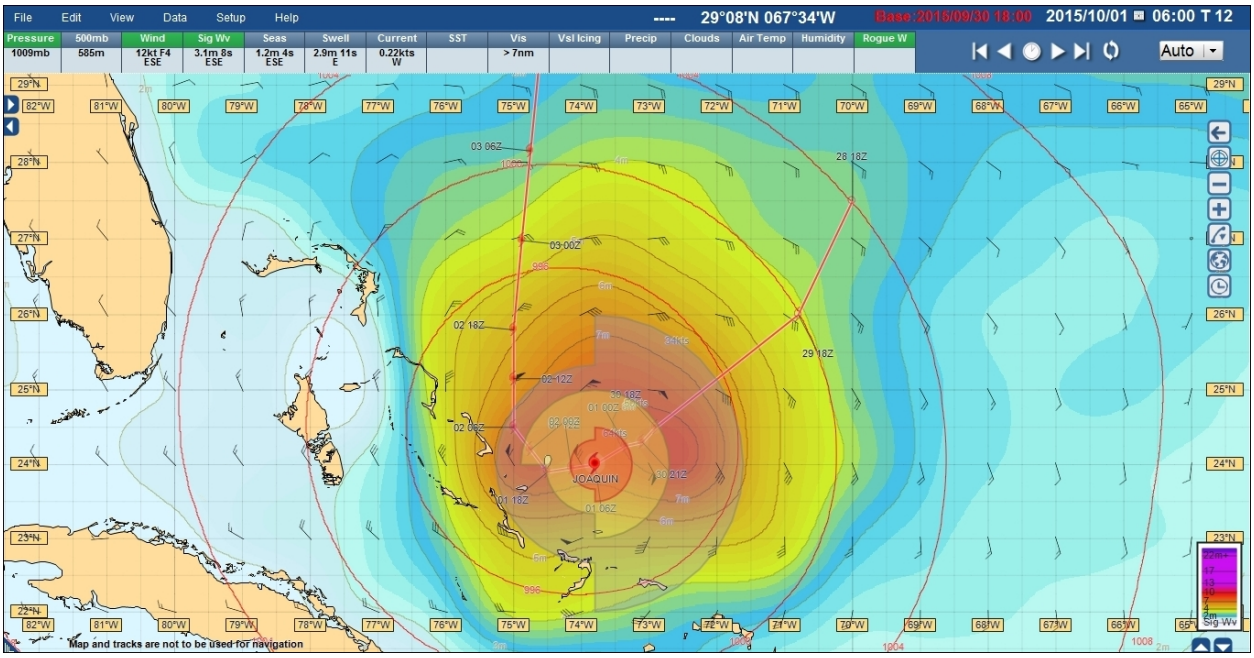


Figure AP – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0200 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 30, 2015.

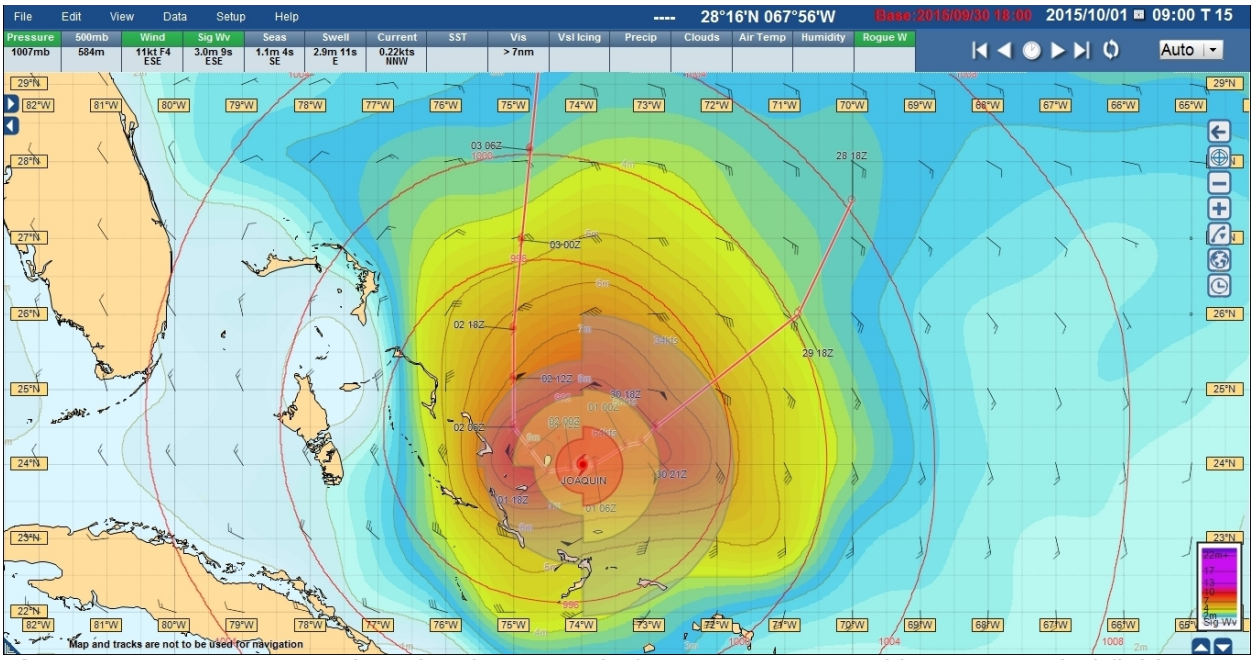


Figure AQ – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on October 1, 2015, contained in main BVS weather file emailed to El Faro about 2300 EDT on September 30, 2015.

how

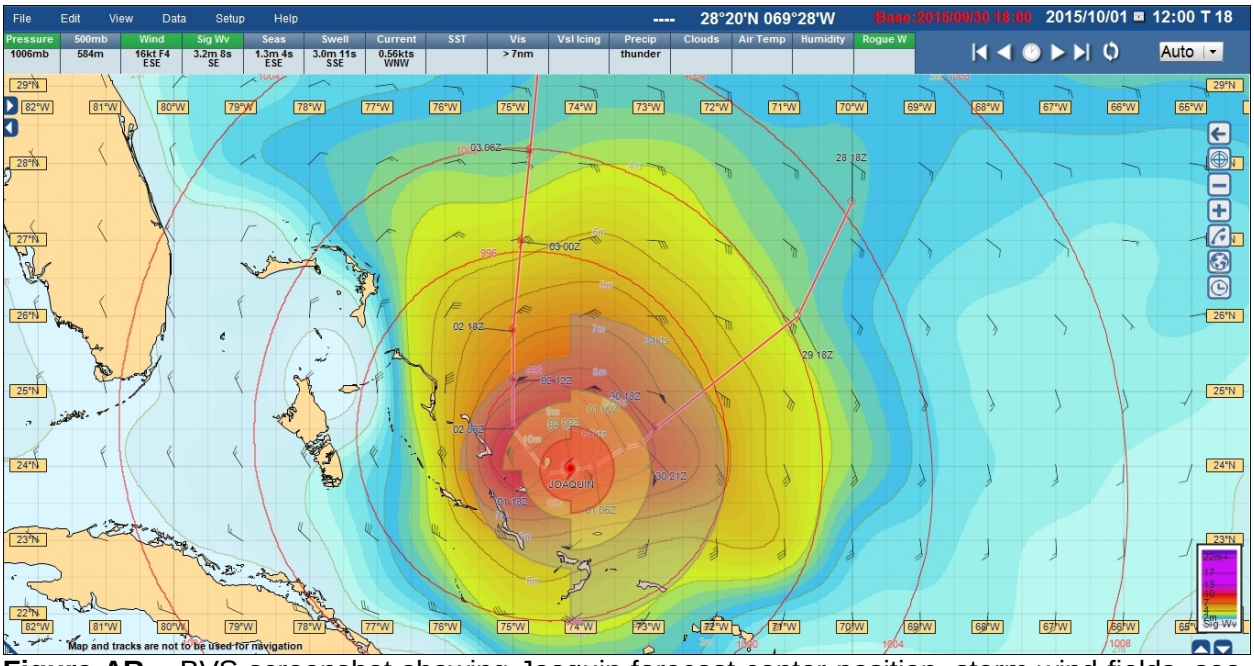
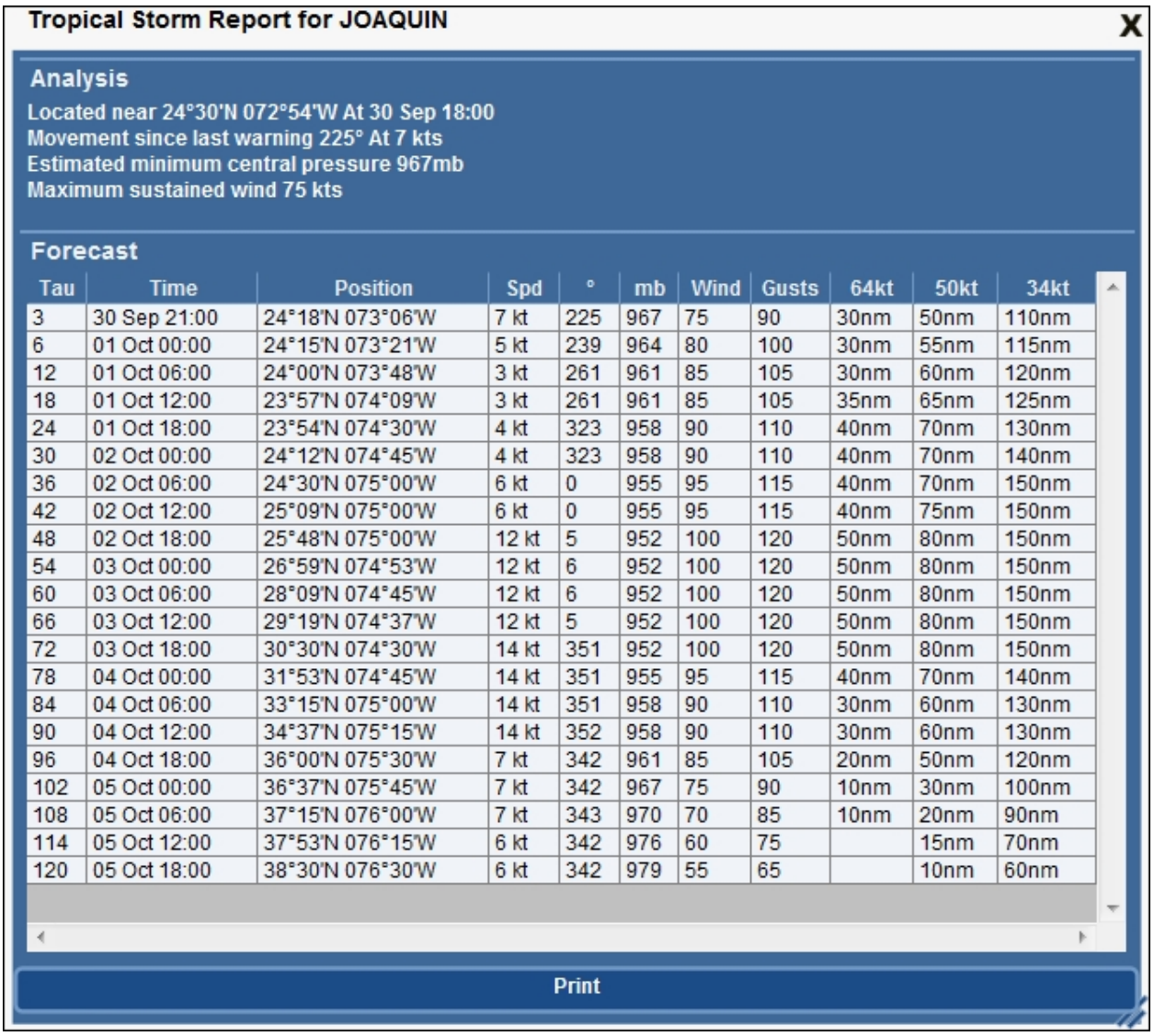


Figure AR – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 2300 EDT on September 30, 2015.



Tropical Storm Report for JOAQUIN

Analysis

Located near 24°30'N 072°54'W At 30 Sep 18:00
Movement since last warning 225° At 7 kts
Estimated minimum central pressure 967mb
Maximum sustained wind 75 kts

Forecast

Tau	Time	Position	Spd	°	mb	Wind	Gusts	64kt	50kt	34kt
3	30 Sep 21:00	24°18'N 073°06'W	7 kt	225	967	75	90	30nm	50nm	110nm
6	01 Oct 00:00	24°15'N 073°21'W	5 kt	239	964	80	100	30nm	55nm	115nm
12	01 Oct 06:00	24°00'N 073°48'W	3 kt	261	961	85	105	30nm	60nm	120nm
18	01 Oct 12:00	23°57'N 074°09'W	3 kt	261	961	85	105	35nm	65nm	125nm
24	01 Oct 18:00	23°54'N 074°30'W	4 kt	323	958	90	110	40nm	70nm	130nm
30	02 Oct 00:00	24°12'N 074°45'W	4 kt	323	958	90	110	40nm	70nm	140nm
36	02 Oct 06:00	24°30'N 075°00'W	6 kt	0	955	95	115	40nm	70nm	150nm
42	02 Oct 12:00	25°09'N 075°00'W	6 kt	0	955	95	115	40nm	75nm	150nm
48	02 Oct 18:00	25°48'N 075°00'W	12 kt	5	952	100	120	50nm	80nm	150nm
54	03 Oct 00:00	26°59'N 074°53'W	12 kt	6	952	100	120	50nm	80nm	150nm
60	03 Oct 06:00	28°09'N 074°45'W	12 kt	6	952	100	120	50nm	80nm	150nm
66	03 Oct 12:00	29°19'N 074°37'W	12 kt	5	952	100	120	50nm	80nm	150nm
72	03 Oct 18:00	30°30'N 074°30'W	14 kt	351	952	100	120	50nm	80nm	150nm
78	04 Oct 00:00	31°53'N 074°45'W	14 kt	351	955	95	115	40nm	70nm	140nm
84	04 Oct 06:00	33°15'N 075°00'W	14 kt	351	958	90	110	30nm	60nm	130nm
90	04 Oct 12:00	34°37'N 075°15'W	14 kt	352	958	90	110	30nm	60nm	130nm
96	04 Oct 18:00	36°00'N 075°30'W	7 kt	342	961	85	105	20nm	50nm	120nm
102	05 Oct 00:00	36°37'N 075°45'W	7 kt	342	967	75	90	10nm	30nm	100nm
108	05 Oct 06:00	37°15'N 076°00'W	7 kt	343	970	70	85	10nm	20nm	90nm
114	05 Oct 12:00	37°53'N 076°15'W	6 kt	342	976	60	75		15nm	70nm
120	05 Oct 18:00	38°30'N 076°30'W	6 kt	342	979	55	65		10nm	60nm

Print

Figure AS – Screenshot of "Tropical Report" text box available in main BVS weather file emailed to *El Faro* about 2300 EDT on September 30, 2015.

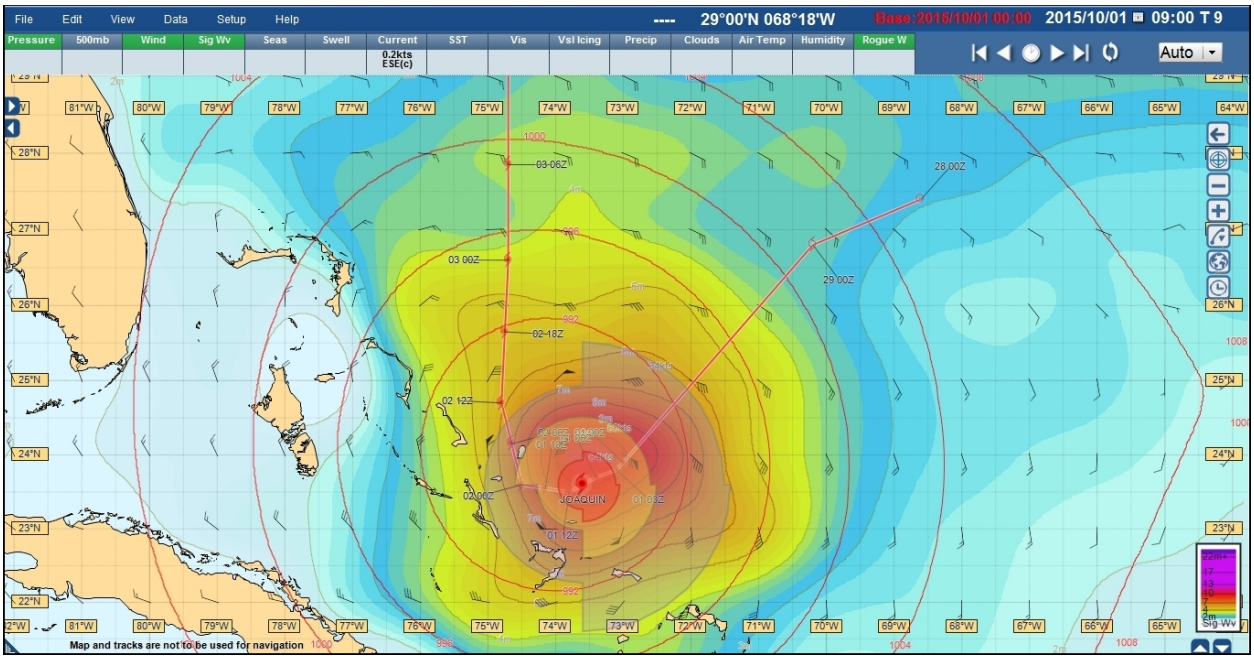


Figure AT – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0500 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on October 1, 2015.

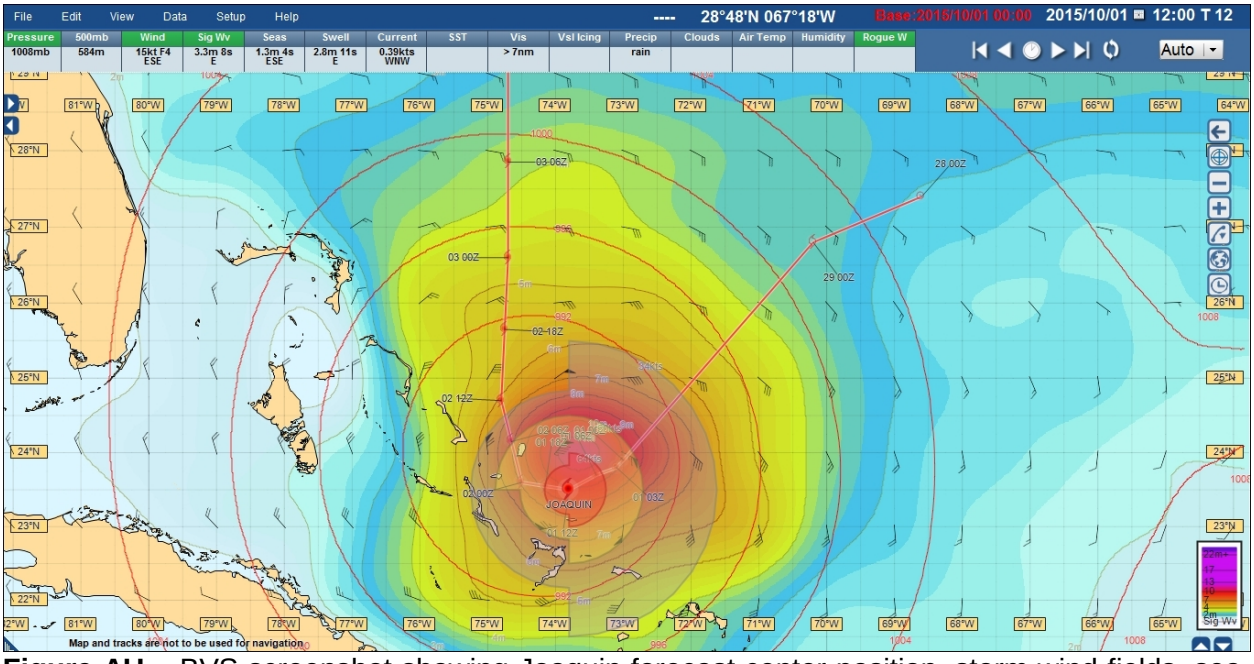
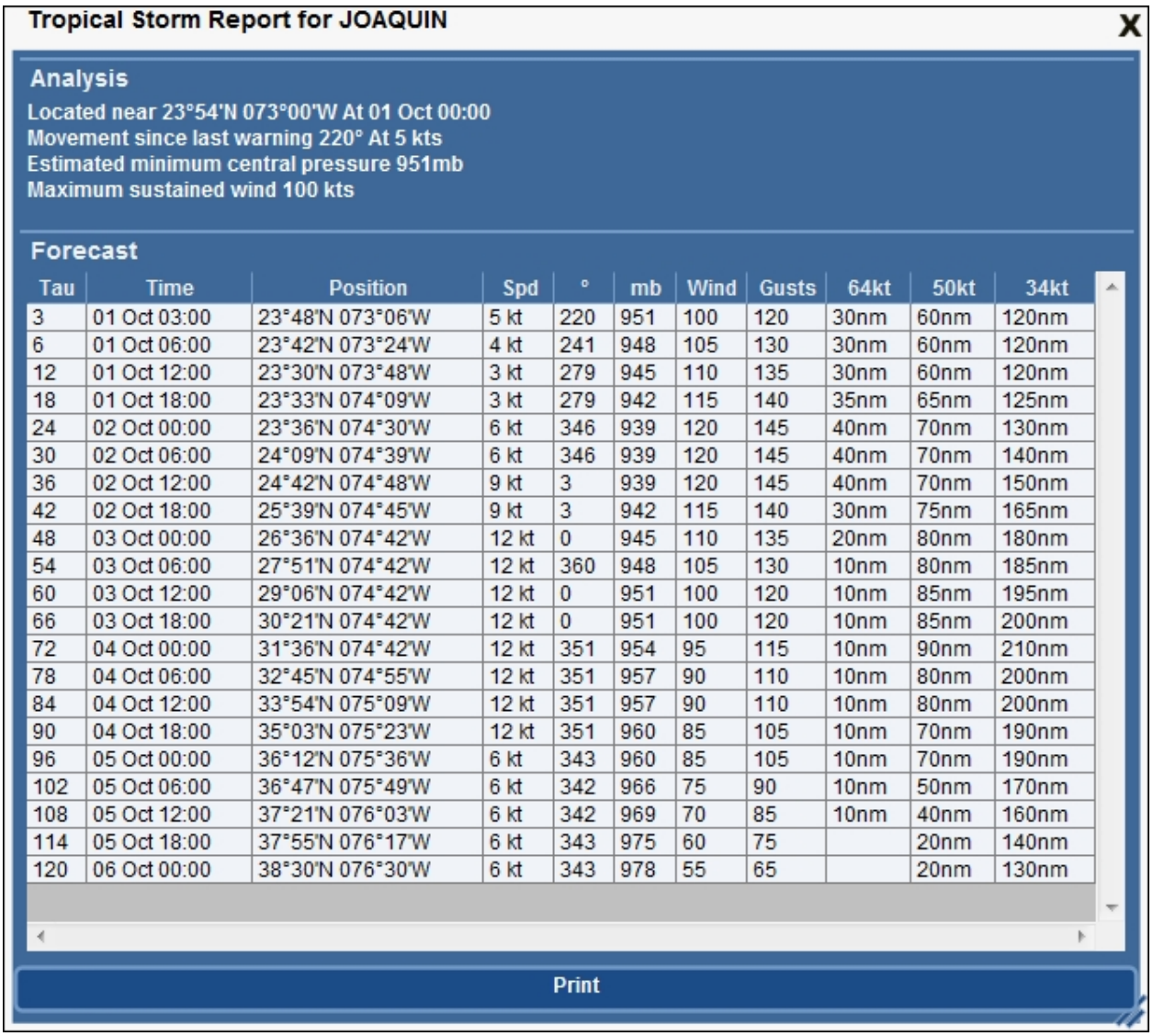


Figure AU – BVS screenshot showing Joaquin forecast center position, storm wind fields, sea-level pressure, surface wind, and significant wave height valid for 0800 EDT on October 1, 2015, contained in main BVS weather file emailed to *El Faro* about 0500 EDT on October 1, 2015.



Tropical Storm Report for JOAQUIN

Analysis

Located near 23°54'N 073°00'W At 01 Oct 00:00
Movement since last warning 220° At 5 kts
Estimated minimum central pressure 951mb
Maximum sustained wind 100 kts

Forecast

Tau	Time	Position	Spd	°	mb	Wind	Gusts	64kt	50kt	34kt
3	01 Oct 03:00	23°48'N 073°06'W	5 kt	220	951	100	120	30nm	60nm	120nm
6	01 Oct 06:00	23°42'N 073°24'W	4 kt	241	948	105	130	30nm	60nm	120nm
12	01 Oct 12:00	23°30'N 073°48'W	3 kt	279	945	110	135	30nm	60nm	120nm
18	01 Oct 18:00	23°33'N 074°09'W	3 kt	279	942	115	140	35nm	65nm	125nm
24	02 Oct 00:00	23°36'N 074°30'W	6 kt	346	939	120	145	40nm	70nm	130nm
30	02 Oct 06:00	24°09'N 074°39'W	6 kt	346	939	120	145	40nm	70nm	140nm
36	02 Oct 12:00	24°42'N 074°48'W	9 kt	3	939	120	145	40nm	70nm	150nm
42	02 Oct 18:00	25°39'N 074°45'W	9 kt	3	942	115	140	30nm	75nm	165nm
48	03 Oct 00:00	26°36'N 074°42'W	12 kt	0	945	110	135	20nm	80nm	180nm
54	03 Oct 06:00	27°51'N 074°42'W	12 kt	360	948	105	130	10nm	80nm	185nm
60	03 Oct 12:00	29°06'N 074°42'W	12 kt	0	951	100	120	10nm	85nm	195nm
66	03 Oct 18:00	30°21'N 074°42'W	12 kt	0	951	100	120	10nm	85nm	200nm
72	04 Oct 00:00	31°36'N 074°42'W	12 kt	351	954	95	115	10nm	90nm	210nm
78	04 Oct 06:00	32°45'N 074°55'W	12 kt	351	957	90	110	10nm	80nm	200nm
84	04 Oct 12:00	33°54'N 075°09'W	12 kt	351	957	90	110	10nm	80nm	200nm
90	04 Oct 18:00	35°03'N 075°23'W	12 kt	351	960	85	105	10nm	70nm	190nm
96	05 Oct 00:00	36°12'N 075°36'W	6 kt	343	960	85	105	10nm	70nm	190nm
102	05 Oct 06:00	36°47'N 075°49'W	6 kt	342	966	75	90	10nm	50nm	170nm
108	05 Oct 12:00	37°21'N 076°03'W	6 kt	342	969	70	85	10nm	40nm	160nm
114	05 Oct 18:00	37°55'N 076°17'W	6 kt	343	975	60	75		20nm	140nm
120	06 Oct 00:00	38°30'N 076°30'W	6 kt	343	978	55	65		20nm	130nm

Print

Figure AV – Screenshot of "Tropical Report" text box available in main BVS weather file emailed to *El Faro* about 0500 EDT on October 1, 2015.