



NOAA Tide Predictions

Columbia River entrance (N. Jetty), Washington, 2015

The NOAA Tide Predictions application provides predictions in both graphical and tabular formats, with many user selected options, for over 3000 stations broken down by key areas in each state. Users can also access stations via the Google map interface. Additional information can be found in the help page.

Station Types: The NOAA Tide Predictions application provides predictions from 2 distinct categories of stations at over 3000 locations:

Harmonic - The predicted height values for Harmonic stations are conducted by combining the harmonic constituents into a single tide curve.

Subordinate - The high and low height values for Subordinate stations are obtained by means and differences, and ratios applied to the full harmonic constant predictions at a specific Harmonic station (a Reference station).

Disclaimer: The official Tide prediction tables are published annually on October 1, for the following calendar year. Tide predictions generated prior to the publishing date of the official tables are subject to change. The predictions from the web based NOAA Tidal Predictions are based upon the latest information available as of the date of your request. Tide predictions generated may differ from the official published predictions if information for the station requested has been updated since the publishing date of the official published tables.



StationId:9440574
Source:NOAA/NOS/CO-OPS
Station Type:Subordinate
Time Zone:LST/LDT
Datum:mean lower low water (MLLW) which is the chart datum of soundings

NOAA Tide Predictions

Columbia River entrance (N. Jetty),Washington,2015

Times and Heights of High and Low Waters

January					February					March				
Time		Height			Time		Height			Time		Height		
h	m	ft	cm		h	m	ft	cm		h	m	ft	cm	
1	02:46 AM	2.9	88		16	02:04 AM	3.6	110		1	03:08 AM	3.2	98	
Th	09:15 AM	8.6	262		F	08:28 AM	8.0	244		Su	09:25 AM	7.2	219	
	04:04 PM	0.2	6			03:32 PM	0.9	27		M	04:09 PM	0.5	15	
	10:32 PM	6.6	201			10:13 PM	6.0	183			10:42 PM	6.7	204	
2	03:42 AM	3.0	91		17	03:08 AM	3.6	110		2	04:03 AM	2.8	85	
F	10:04 AM	8.7	265		Sa	09:23 AM	8.4	256		M	10:17 AM	7.4	226	
	04:53 PM	-0.2	-6			04:24 PM	0.2	6		Tu	04:52 PM	0.3	9	
	11:25 PM	6.9	210			11:06 PM	6.5	198			11:23 PM	7.0	213	
3	04:35 AM	3.1	94		18	04:06 AM	3.4	104		3	04:51 AM	2.4	73	
Sa	10:49 AM	8.7	265		Su	10:15 AM	8.8	268		Tu	11:03 AM	7.5	229	
	05:38 PM	-0.4	-12			05:11 PM	-0.4	-12			05:29 PM	0.3	9	
						11:53 PM	7.0	213		W	06:03 PM	-0.4	-12	
4	12:12 AM	7.2	219		19	05:01 AM	3.1	94		4	12:00 AM	7.2	219	
Su	05:23 AM	3.1	94		M	11:06 AM	9.1	277		W	05:34 AM	2.0	61	
	11:32 AM	8.6	262			05:57 PM	-0.8	-24		Th	11:44 AM	7.5	229	
	06:19 PM	-0.4	-12								06:03 PM	0.3	9	
5	12:55 AM	7.4	226		20	12:37 AM	7.4	226		5	12:32 AM	7.4	226	
M	06:09 AM	3.1	94		Tu	05:53 AM	2.7	82		Th	06:14 AM	1.7	52	
O	12:50 PM	8.4	256		●	11:56 AM	9.3	283		F	12:23 PM	7.4	226	
	06:57 PM	-0.3	-9			06:41 PM	-1.1	-34		O	06:34 PM	0.5	15	
6	01:35 AM	7.4	226		21	01:20 AM	7.8	238		6	01:02 AM	7.4	226	
Tu	06:52 AM	3.1	94		W	06:44 AM	2.3	70		F	06:51 AM	1.5	46	
	12:50 PM	8.2	250			12:46 PM	9.2	280		Sa	01:00 PM	7.3	223	
	07:31 PM	-0.1	-3			07:23 PM	-1.1	-34			07:04 PM	0.7	21	
7	02:12 AM	7.4	226		22	02:01 AM	8.1	247		7	01:29 AM	7.5	229	
W	07:32 AM	3.0	91		Th	07:34 AM	1.9	58		Sa	07:26 AM	1.3	40	
	01:27 PM	7.9	241			01:36 PM	9.0	274			01:37 PM	7.1	216	
	08:03 PM	0.1	3			08:04 PM	-0.9	-27			07:32 PM	0.9	27	
8	02:47 AM	7.4	226		23	02:43 AM	8.3	253		8	01:55 AM	7.6	232	
Th	08:11 AM	3.0	91		F	08:25 AM	1.7	52		Su	09:00 AM	1.1	34	
	02:04 PM	7.5	229			02:28 PM	8.5	259			03:14 PM	6.8	207	
	08:33 PM	0.4	12			08:46 PM	-0.4	-12			08:59 PM	1.3	40	
9	03:20 AM	7.3	223		24	03:26 AM	8.4	256		9	03:20 AM	7.7	235	
F	08:51 AM	2.9	88		Sa	09:17 AM	1.5	46		M	09:33 AM	1.1	34	
	02:43 PM	7.1	216			03:23 PM	7.8	238			03:53 PM	6.5	198	
	09:02 PM	0.8	24			09:28 PM	0.2	6			09:28 PM	1.7	52	
10	03:53 AM	7.3	223		25	04:10 AM	8.4	256		10	03:47 AM	7.7	235	
Sa	09:32 AM	2.9	88		Su	10:14 AM	1.5	46		Tu	10:08 AM	1.1	34	
	03:25 PM	6.6	201			04:23 PM	7.1	216			04:36 PM	6.1	186	
	09:33 PM	1.3	40			10:14 PM	1.0	30			10:01 PM	2.1	64	
11	04:26 AM	7.3	223		26	04:58 AM	8.3	253		11	04:20 AM	7.7	235	
Su	10:19 AM	2.9	88		M	11:18 AM	1.5	46		W	10:50 AM	1.1	34	
	04:15 PM	6.0	183			05:30 PM	6.4	195			05:28 PM	5.7	174	
	10:08 PM	1.8	55			11:06 PM	1.9	58			10:40 PM	2.6	79	
12	05:03 AM	7.3	223		27	05:50 AM	8.2	250		12	05:01 AM	7.6	232	
M	11:15 AM	2.8	85		Tu	12:28 PM	1.4	43		Th	11:43 AM	1.3	40	
	05:17 PM	5.5	168			06:45 PM	5.9	180			06:34 PM	5.4	165	
	10:52 PM	2.4	73		●						11:32 PM	3.1	94	
13	05:46 AM	7.3	223		28	12:07 AM	2.6	79		13	05:53 AM	7.4	226	
Tu	12:22 PM	2.6	79		W	06:48 AM	8.0	244		F	12:53 PM	1.3	40	
●	06:35 PM	5.2	158			01:41 PM	1.2	37			07:51 PM	5.2	158	
	11:48 PM	3.0	91			08:04 PM	5.8	177		●				
14	06:36 AM	7.5	229		29	01:16 AM	3.1	94		14	12:43 AM	3.5	107	
W	01:31 PM	2.2	67		Th	07:49 AM	8.0	244		Sa	07:00 AM	7.3	223	
	07:57 PM	5.2	158			02:48 PM	0.8	24			02:12 PM	1.1	34	
						09:17 PM	6.0	183			09:07 PM	5.5	168	
15	12:56 AM	3.4	104		30	02:23 AM	3.4	104		15	02:08 AM	3.5	107	
Th	07:31 AM	7.7	235		F	08:49 AM	8.0	244		Su	08:18 AM	7.2	219	
	02:35 PM	1.6	49			03:46 PM	0.5	15			03:23 PM	0.7	21	
	09:11 PM	5.5	168			10:18 PM	6.4	195			10:11 PM	6.0	183	
					31	03:25 AM	3.3	101						
					Sa	09:44 AM	8.1	247						
						04:36 PM	0.1	3						
						11:09 PM	6.8	207		31	04:42 AM	2.3	70	
										Tu	10:55 AM	6.6	201	
											05:12 PM	0.9	27	
											11:45 PM	7.0	213	

Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tide tables.

Referenced to Station: ASTORIA (Tongue Point), Oreg. (9439040) Time offset in mins (high:-44 low:-60) Height offset in feet (high:-1.00 low:+0.10)



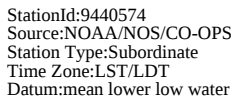
StationId:9440574
Source:NOAA/NOS/CO-OPS
Station Type:Subordinate
Time Zone:LST/LDT
Datum:mean lower low water (MLLW) which is the chart datum of soundings

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April					May					June													
Time		Height			Time		Height			Time		Height			Time		Height						
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm							
1 W	05:29 AM	1.8	55	16 Th	05:14 AM	0.7	21	1 F	05:45 AM	0.8	24	16 Sa	05:54 AM	-0.6	-18	1 M	06:40 AM	-0.4	-12	16 Tu	12:29 AM	8.5	259
	11:43 AM	6.7	204		11:30 AM	7.4	226		12:06 PM	6.3	192		12:17 PM	6.9	210		01:16 PM	6.2	189		07:17 AM	-1.3	-40
	05:50 PM	0.8	24		05:31 PM	0.3	9		05:43 PM	1.6	49		05:49 PM	1.4	43		06:27 PM	2.6	79		01:51 PM	6.8	207
					11:59 PM	8.1	247									07:05 PM	2.4	73					
2 Th	12:20 AM	7.2	219	17 F	06:08 AM	-0.1	-3	2 Sa	12:06 AM	7.5	229	17 Su	12:10 AM	8.7	265	2 Tu	12:32 AM	8.0	244	17 W	01:12 AM	8.3	253
	06:12 AM	1.3	40		06:26 AM	0.3	9		06:44 AM	-1.1	-34		07:21 AM	-0.7	-21		07:21 AM	-0.7	-21		08:01 AM	-1.2	-37
	12:27 PM	6.9	210		12:50 PM	6.4	195		01:11 PM	7.1	216		02:00 PM	6.4	195		02:38 PM	6.8	207				
06:25 PM	0.9	27	06:18 PM		0.4	12	06:21 PM	1.8	55	06:37 PM	1.6	49	07:10 PM	2.7	82	07:53 PM	2.5	76					
3 F	12:51 AM	7.4	226	18 Sa	12:41 AM	8.5	259	3 Su	12:37 AM	7.7	235	18 M	12:53 AM	8.7	265	3 W	01:09 AM	8.2	250	18 Th	01:55 AM	8.0	244
	06:51 AM	0.9	27		06:59 AM	-0.7	-21		07:04 AM	0.0	0		07:32 AM	-1.3	-40		08:00 AM	-0.9	-27		08:42 AM	-1.0	-30
	01:08 PM	6.9	210		01:20 PM	7.6	232		01:33 PM	6.5	198		02:03 PM	7.1	216		02:44 PM	6.5	198		03:23 PM	6.8	207
06:59 PM	1.1	34	07:04 PM		0.7	21	06:58 PM	2.0	61	07:25 PM	1.9	58	07:53 PM	2.7	82	08:39 PM	2.5	76					
4 Sa	01:20 AM	7.5	229	19 Su	01:23 AM	8.7	265	4 M	01:07 AM	7.8	238	19 Tu	01:35 AM	8.6	262	4 Th	01:48 AM	8.2	250	19 F	02:36 AM	7.6	232
	07:28 AM	0.6	18		07:48 AM	-1.0	-30		07:42 AM	-0.2	-6		08:18 AM	-1.3	-40		08:40 AM	-1.0	-30		09:21 AM	-0.7	-21
	01:47 PM	6.9	210		02:12 PM	7.5	229		02:14 PM	6.5	198		02:53 PM	7.0	213		03:27 PM	6.6	201		04:05 PM	6.7	204
07:31 PM	1.3	40	07:49 PM		1.1	34	07:34 PM	2.2	67	07:34 PM	2.2	67	08:12 PM	2.2	67	08:37 PM	2.7	82	09:23 PM		2.6	79	
5 Su	01:47 AM	7.6	232	20 M	02:03 AM	8.7	265	5 Tu	01:37 AM	7.9	241	20 W	02:16 AM	8.3	253	5 F	02:30 AM	8.2	250	20 Sa	03:18 AM	7.2	219
	08:03 AM	0.4	12		08:35 AM	-1.1	-34		08:18 AM	-0.4	-12		09:02 AM	-1.1	-34		09:20 AM	-1.0	-30		09:57 AM	-0.3	-9
	02:26 PM	6.8	207		03:04 PM	7.3	223		02:56 PM	6.5	198		03:42 PM	6.9	210		04:10 PM	6.6	201		04:46 PM	6.6	201
08:02 PM	1.6	49	08:33 PM		1.5	46	08:11 PM	2.4	73	08:58 PM	2.5	76	08:58 PM	2.5	76	09:24 PM	2.6	79	10:08 PM		2.6	79	
6 M	02:14 AM	7.7	235	21 Tu	02:44 AM	8.5	259	6 W	02:10 AM	8.0	244	21 Th	02:58 AM	7.9	241	6 Sa	03:17 AM	7.9	241	21 Su	04:01 AM	6.7	204
	08:37 AM	0.3	9		09:21 AM	-0.9	-27		08:54 AM	-0.5	-15		09:45 AM	-0.7	-21		10:02 AM	-0.8	-24		10:32 AM	0.1	3
	03:05 PM	6.6	201		03:55 PM	7.1	216		03:38 PM	6.4	195		04:30 PM	6.7	204		04:56 PM	6.7	204		05:26 PM	6.5	198
08:33 PM	1.8	55	09:18 PM		2.0	61	08:50 PM	2.6	79	09:18 PM	2.7	82	09:44 PM	2.7	82	10:15 PM	2.6	79	10:55 PM		2.6	79	
7 Tu	02:41 AM	7.8	238	22 W	03:26 AM	8.2	250	7 Th	02:46 AM	8.0	244	22 F	03:42 AM	7.4	226	7 Su	04:08 AM	7.5	229	22 M	04:48 AM	6.1	186
	09:11 AM	0.2	6		10:08 AM	-0.5	-15		09:32 AM	-0.5	-15		10:27 AM	-0.2	-6		10:47 AM	-0.5	-15		11:09 AM	0.6	18
	03:45 PM	6.4	195		04:48 PM	6.7	204		04:23 PM	6.3	192		05:18 PM	6.6	201		05:43 PM	6.8	207		06:07 PM	6.5	198
09:06 PM	2.2	67	10:04 PM		2.4	73	09:31 PM	2.8	85	10:33 PM	2.9	88	10:33 PM	2.9	88	11:13 PM	2.4	73	11:48 PM		2.6	79	
8 W	03:11 AM	7.9	241	23 Th	04:10 AM	7.7	235	8 F	03:27 AM	7.9	241	23 Sa	04:28 AM	6.8	207	8 M	05:08 AM	7.0	213	23 Tu	05:43 AM	5.5	168
	09:47 AM	0.2	6		10:56 AM	0.0	0		10:14 AM	-0.3	-9		11:10 AM	0.3	9		11:36 AM	-0.1	-3		11:50 AM	1.1	34
	04:29 PM	6.2	189		05:42 PM	6.4	195		05:12 PM	6.2	189		06:07 PM	6.4	195		06:34 PM	6.9	210		06:50 PM	6.5	198
09:42 PM	2.5	76	10:55 PM		2.9	88	10:19 PM	2.9	88	10:19 PM	2.9	88	11:27 PM	3.0	91								
9 Th	03:48 AM	7.8	238	24 F	04:59 AM	7.1	216	9 Sa	04:16 AM	7.6	232	24 Su	05:20 AM	6.2	189	9 Tu	12:19 AM	2.2	67	24 W	12:48 AM	2.4	73
	10:28 AM	0.3	9		11:48 AM	0.5	15		11:02 AM	-0.1	-3		11:57 AM	0.8	24		06:16 AM	6.4	195		06:47 AM	5.0	152
	05:20 PM	5.9	180		06:40 PM	6.1	186		06:05 PM	6.2	189		06:57 PM	6.3	192		12:32 PM	0.4	12		12:37 PM	1.6	49
10:25 PM	2.8	85	11:54 PM		3.2	98	11:18 PM	3.0	91	11:18 PM	3.0	91	07:28 PM	7.1	216	07:34 PM	6.5	198					
10 F	04:32 AM	7.6	232	25 Sa	05:56 AM	6.4	195	10 Su	05:14 AM	7.1	216	25 M	12:28 AM	3.0	91	10 W	01:32 AM	1.8	55	25 Th	01:53 AM	2.1	64
	11:18 AM	0.5	15		12:46 PM	1.0	30		11:59 AM	0.2	6		06:22 AM	5.6	171		07:33 AM	5.9	180		07:59 AM	4.8	146
	06:20 PM	5.7	174		07:40 PM	6.1	186		07:03 PM	6.3	192		12:48 PM	1.2	37		01:33 PM	0.9	27		01:31 PM	2.1	64
11:21 PM	3.2	98								07:47 PM	6.3	192	07:47 PM	6.3	192	08:22 PM	7.4	226	08:21 PM		6.7	204	
11 Sa	05:27 AM	7.3	223	26 Su	01:02 AM	3.3	101	11 M	12:29 AM	2.9	88	26 Tu	01:35 AM	2.8	85	11 Th	02:43 AM	1.2	37	26 F	02:55 AM	1.7	52
	12:22 PM	0.7	21		06:25 AM	6.7	204		07:32 AM	5.3	162		08:52 AM	5.8	177		09:13 AM	4.8	146				
	07:27 PM	5.7	174		01:03 PM	0.5	15		01:42 PM	1.6	49		02:35 PM	1.3	40		02:29 PM	2.4	73				
			08:02 PM		6.5	198	08:02 PM	6.5	198	08:37 PM	6.5	198	09:16 PM	7.8	238	09:08 PM	6.9	210					
12 Su	12:34 AM	3.3	101	27 M	02:13 AM	3.0	91	12 Tu	01:46 AM	2.5	76	27 W	02:40 AM	2.3	70	12 F	03:48 AM	0.4	12	27 Sa	03:52 AM	1.1	34
	06:37 AM	6.9	210		07:44 AM	6.3	192		08:44 AM	5.1	155		10:05 AM	5.9	180		10:19 AM	5.0	152				
	01:35 PM	0.8	24		02:08 PM	0.7	21		02:36 PM	1.8	55		03:35 PM	1.6	49		03:25 PM	2.6	79				
08:34 PM	5.9	180	09:32 PM		6.4	195	08:59 PM	7.0	213	09:23 PM	6.7	204	10:08 PM	8.1	247	09:53 PM	7.2	219					
13 M	01:57 AM	3.1	94	28 Tu	03:18 AM	2.6	79	13 W	02:58 AM	1.8	55	28 Th	03:38 AM	1.8	55	13 Sa	04:47 AM	-0.3	-9	28 Su	04:44 AM	0.5	15
	07:58 AM	6.8	207		09:04 AM	6.3	192		09:51 AM	7.5	229		09:51 AM	5.2	158		11:10 AM	6.1	186		11:18 AM	5.3	162
	02:45 PM	0.7	21		03:10 PM	0.8	24		03:27 PM	2.0	61		03:27 PM	2.0	61		04:31 PM	1.9	58		04:19 PM	2.7	82
09:35 PM	6.4	195	10:18 PM		6.7	204	09:51 PM	7.5	229	10:05 PM	7.0	213	10:05 PM	7.0	213	10:57 PM	8.4	256	10:38 PM		7.5	229	
14 Tu	03:12 AM	2.4	73	29 W	04:13 AM	1.9	58	14 Th	04:02 AM	0.9	27	29 F	04:29 AM	1.1	34	14 Su	05:40 AM	-0.8	-24	29 M	05:31 AM	-0.1	-3
	09:18 AM	6.9	210		10:16 AM	6.4	195		10:51 AM	5.5	168		12:08 PM	6.4	195		12:09 PM	5.7	174				
	03:47 PM	0.5	15		04:06 PM	1.0	30		04:14 PM	2.2	67		05:24 PM	2.1	64		05:10 PM	2.8	85				
10:28 PM	7.0	213	10:58 PM		7.0	213	10:40 PM	8.0	244	10:44 PM	7.3	223	11:44 PM	8.5	259	11:21 PM	7.8	238					
15 W	04:17 AM	1.6	49	30 Th	05:02 AM	1.3	40	15 F	05:00 AM	0.1	3	30 Sa	05:16 AM	0.5	15	15 M	06:31 AM	-1.1	-34	30 Tu	06:16 AM	-0.6	-18
	10:28 AM	7.1	216		11:20 AM	6.7	204		11:43 AM	5.8	177		01:02 PM	6.6	201		12:56 PM	6.1	186				
	04:41 PM	0.3	9		04:59 PM	1.1	34		04:59 PM	2.3	70		06:16 PM	2.2	67		06:00 PM	2.7	82				
11:16 PM	7.6	232	11:34 PM		7.3	223	11:26 PM	8.4	256	11:21 PM	7.6	232											



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Columbia River entrance (N. Jetty),Washington,2015

Times and Heights of High and Low Waters

October					November					December														
Time		Height			Time		Height			Time		Height			Time		Height							
	h m	ft cm			h m	ft cm			h m	ft cm		h m	ft cm		h m	ft cm								
1 Th	03:41 AM	7.1	216		16 Su	04:20 AM	6.7	204		16 M	03:48 AM	6.5	198		1 Tu	04:45 AM	7.0	213		16 W	04:11 AM	7.3	223	
	09:15 AM	1.0	30			09:35 AM	2.8	85			08:55 AM	3.2	98			10:09 AM	3.3	101			09:40 AM	3.0	91	
	03:30 PM	8.2	250			03:36 PM	7.2	219			02:46 PM	7.7	235			04:02 PM	6.7	204			03:32 PM	7.5	229	
	10:04 PM	-0.9	-27			10:24 PM	0.2	6			09:30 PM	0.1	3			10:35 PM	0.9	27			09:59 PM	0.4	12	
2 F	04:37 AM	6.6	201		2 M	05:18 AM	6.4	195		17 Tu	04:37 AM	6.4	195		2 W	05:35 AM	6.9	210		17 Th	04:58 AM	7.4	226	
	10:02 AM	1.6	49			10:35 AM	3.1	94			09:49 AM	3.3	101			11:10 AM	3.3	101			10:42 AM	2.8	85	
	04:16 PM	7.8	238			04:34 PM	6.6	201			03:39 PM	7.2	219			05:03 PM	6.0	183			04:36 PM	6.9	210	
	10:57 PM	-0.4	-12			11:22 PM	0.8	24			10:21 PM	0.4	12			11:25 PM	1.5	46			10:50 PM	0.9	27	
3 Sa	05:37 AM	6.2	189		3 Tu	06:17 AM	6.3	192		18 W	05:30 AM	6.5	198		3 Th	06:26 AM	6.9	210		18 F	05:49 AM	7.6	232	
	10:54 AM	2.2	67			11:44 AM	3.2	98			10:56 AM	3.3	101			12:17 PM	3.1	94			11:54 AM	2.5	76	
	05:07 PM	7.2	219			05:43 PM	6.0	183			04:46 PM	6.7	204			06:14 PM	5.6	171			05:52 PM	6.3	192	
	11:57 PM	0.1	3						11:21 PM		0.8	24						11:50 PM	1.5		46			
4 Su	06:42 AM	5.8	177		4 M	12:23 AM	1.2	37		19 Th	06:28 AM	6.7	204		4 F	12:20 AM	2.0	61		19 Sa	06:44 AM	7.9	241	
	11:56 AM	2.7	82			07:16 AM	6.4	195			12:13 PM	2.9	88			07:16 AM	7.0	213			01:08 PM	1.9	58	
	06:08 PM	6.6	201			12:57 PM	3.0	91			06:06 PM	6.3	192			01:25 PM	2.7	82			07:14 PM	6.0	183	
						06:58 PM	5.7	174								07:29 PM	5.4	165						
5 M	01:03 AM	0.5	15		5 Th	01:23 AM	1.4	43		20 F	12:28 AM	1.1	34		5 Sa	01:16 AM	2.4	73		20 Su	12:55 AM	2.0	61	
	07:50 AM	5.7	174			08:11 AM	6.6	201			07:25 AM	7.1	216			08:04 AM	7.2	219			07:40 AM	8.2	250	
	01:09 PM	2.9	88			02:04 PM	2.5	76			01:28 PM	2.3	70			02:25 PM	2.1	64			02:17 PM	1.2	37	
	07:19 PM	6.2	189			08:11 PM	5.6	171			07:30 PM	6.2	189			08:39 PM	5.5	168			08:34 PM	6.1	186	
6 Tu	02:12 AM	0.7	21		6 F	02:17 AM	1.6	49		21 Sa	01:33 AM	1.3	40		6 Su	02:09 AM	2.6	79		21 M	01:59 AM	2.4	73	
	08:56 AM	5.9	180			08:58 AM	6.9	210			08:19 AM	7.6	232			08:48 AM	7.5	229			08:35 AM	8.6	262	
	02:24 PM	2.8	85			03:00 PM	1.8	55			02:35 PM	1.3	40			03:18 PM	1.5	46			03:20 PM	0.4	12	
	08:34 PM	6.0	183			09:14 PM	5.8	177			08:46 PM	6.4	195			09:41 PM	5.8	177			09:44 PM	6.4	195	
7 W	03:15 AM	0.7	21		7 Sa	03:05 AM	1.7	52		22 Su	02:33 AM	1.5	46		7 M	02:59 AM	2.8	85		22 Tu	03:01 AM	2.6	79	
	09:54 AM	6.2	189			09:40 AM	7.3	223			09:09 AM	8.2	250			09:29 AM	7.8	238			09:28 AM	9.0	274	
	03:30 PM	2.3	70			03:49 PM	1.2	37			03:34 PM	0.4	12			04:05 PM	0.9	27			04:16 PM	-0.3	-9	
	09:42 PM	6.0	183			10:08 PM	6.1	186			09:53 PM	6.7	204			10:34 PM	6.1	186			10:45 PM	6.9	210	
8 Th	04:07 AM	0.6	18		8 Su	03:47 AM	1.8	55		23 M	03:28 AM	1.6	49		8 Tu	03:45 AM	2.9	88		23 W	03:58 AM	2.7	82	
	10:42 AM	6.6	201			10:16 AM	7.5	229			09:56 AM	8.7	265			10:07 AM	8.0	244			10:18 AM	9.2	280	
	04:26 PM	1.7	52			04:32 PM	0.7	21			04:28 PM	-0.4	-12			04:47 PM	0.4	12			05:07 PM	-0.7	-21	
	10:40 PM	6.2	189			10:55 PM	6.3	192			10:53 PM	7.1	216			11:21 PM	6.4	195			11:40 PM	7.2	219	
9 F	04:52 AM	0.6	18		9 M	04:26 AM	1.9	58		24 Tu	04:20 AM	1.8	55		9 W	04:29 AM	3.1	94		24 Th	04:52 AM	2.8	85	
	11:23 AM	6.9	210			10:49 AM	7.7	235			10:42 AM	9.1	277			10:42 AM	8.2	250			11:06 AM	9.3	283	
	05:13 PM	1.2	37			05:12 PM	0.2	6			05:19 PM	-1.0	-30			05:27 PM	0.1	3			05:55 PM	-1.0	-30	
	11:30 PM	6.4	195			11:39 PM	6.5	198			11:48 PM	7.3	223											
10 Sa	05:31 AM	0.7	21		10 Tu	05:04 AM	2.1	64		25 W	05:10 AM	2.0	61		10 Th	12:05 AM	6.7	204		25 F	12:30 AM	7.5	229	
	11:59 AM	7.1	216			11:20 AM	7.9	241			11:26 AM	9.3	283			05:12 AM	3.2	98			05:44 AM	2.8	85	
	05:56 PM	0.7	21			05:49 PM	0.0	0			06:08 PM	-1.3	-40			11:17 AM	8.4	256			11:52 AM	9.2	280	
														06:06 PM		-0.2	-6		06:41 PM		-1.0	-30		
11 Su	12:14 AM	6.6	201		11 W	12:20 AM	6.6	201		26 Th	12:40 AM	7.5	229		11 F	12:47 AM	6.9	210		26 Sa	01:17 AM	7.6	232	
	06:06 AM	0.8	24			05:41 AM	2.3	70			05:59 AM	2.2	67			05:54 AM	3.2	98			06:33 AM	2.8	85	
	12:31 PM	7.3	223			11:49 AM	8.0	244			12:09 PM	9.2	280			11:53 AM	8.5	259			12:36 PM	8.9	271	
	06:35 PM	0.3	9			06:26 PM	-0.2	-6			06:55 PM	-1.3	-40			06:43 PM	-0.4	-12			07:23 PM	-0.8	-24	
12 M	12:55 AM	6.6	201		12 Th	01:01 AM	6.7	204		27 F	01:30 AM	7.5	229		12 Sa	01:28 AM	7.0	213		27 Su	02:02 AM	7.7	235	
	06:40 AM	1.0	30			06:17 AM	2.6	79			06:48 AM	2.4	73			06:36 AM	3.3	101			07:20 AM	2.9	88	
	01:00 PM	7.4	226			12:19 PM	8.1	247			12:53 PM	9.0	274			12:29 PM	8.6	262			01:20 PM	8.6	262	
	07:12 PM	0.1	3			07:01 PM	-0.3	-9			07:40 PM	-1.1	-34			07:20 PM	-0.5	-15			08:02 PM	-0.5	-15	
13 Tu	01:34 AM	6.6	201		13 F	01:41 AM	6.7	204		28 Sa	02:19 AM	7.5	229		13 Su	02:08 AM	7.1	216		28 M	02:44 AM	7.6	232	
	07:13 AM	1.3	40			06:54 AM	2.8	85			07:36 AM	2.7	82			07:18 AM	3.2	98			08:06 AM	2.9	88	
	01:27 PM	7.4	226			12:49 PM	8.1	247			01:37 PM	8.6	262			01:08 PM	8.5	259			02:03 PM	8.1	247	
	07:47 PM	-0.1	-3			07:35 PM	-0.3	-9			08:24 PM	-0.8	-24			07:57 PM	-0.5	-15			08:39 PM	-0.1	-3	
14 W	02:13 AM	6.5	198		14 Sa	02:21 AM	6.6	201		29 Su	03:08 AM	7.4	226		14 M	02:47 AM	7.2	219		29 Tu	03:25 AM	7.5	229	
	07:45 AM	1.6	49			07:31 AM	3.0	91			08:24 AM	2.9	88			08:01 AM	3.2	98			08:51 AM	2.9	88	
	01:53 PM	7.5	229			01:23 PM	8.1	247			02:22 PM	8.1	247			01:51 PM	8.4	256			02:46 PM	7.5	229	
	08:20 PM	-0.1	-3			08:10 PM	-0.3	-9			09:07 PM	-0.3	-9			08:34 PM	-0.4	-12			09:14 PM	0.5	15	
15 Th	02:52 AM	6.4	195		15 Su	03:03 AM	6.6	201		30 M	03:56 AM	7.2	219		15 Tu	03:28 AM	7.2	219		30 W	04:05 AM	7.4	226	
	08:16 AM	1.9	58			08:10 AM	3.1	94			09:14 AM	3.1	94			08:48 AM	3.1	94			09:38 AM	3.0	91	
	02:20 PM	7.5	229			02:01 PM	7.9	241			03:09 PM	7.4	226			02:38 PM	8.0	244			03:33 PM	6.8	207	
	08:53 PM	-0.1	-3			08:48 PM	-0.1	-3			09:50 PM	0.3	9			09:14 PM	-0.1	-3			09:50 PM	1.0	30	