

**THE TWELFTH ANNUAL  
GREAT POTTER YACHTER  
NORTHWEST ESCAPE  
AND  
MESSABOUT**



**September  
2014**

*“There is nothing – absolutely nothing –  
half so much worth doing  
as simply messing about in boats.”*

**Kenneth Grahame  
“The Wind in the Willows”**

## OUR MISSION

**You are the captain of your vessel,  
and while we travel with friends, you sail alone.  
Pottering is a frame of mind,  
where friends share the fun of sailing small craft.  
Therefore, our mission is to advance the cause of Potterdom,  
and make safe harbor.**



***Have Fun And Sail Safe!***

The enclosed information and charts are for planning and reference only. The GPS coordinates have not been verified and the sailing directions are designed to help you in the planning of your route.

*Cover Photo: Dan Phy  
The Suspects: C. Billings*

**Messabout XII**  
**The Plan**  
**Sept 2014**

**Travel:** Drive to Kingston, WA (approximately 800 miles, 15 hours driving time from the Bay area).

**Option 1 & 2:** Drive to Olympia, WA, and launch out of Swantown Marina. From Olympia, it is a four-day sail to Kingston via Longbranch, Gig Harbor, and Blake Island.

**Launch:** Time your arrival to launch out of Kingston on Wednesday, Sept 3. Kingston has a boat ramp, parking, and guest docks with shopping nearby. There is no launch fee, but parking is \$8.00 per day. (www.portofkingston.org).

**Itinerary:** *lv MA-XII titled blog - launch 8/28 (trans)*

**Option 1:**

- Day 1: Saturday, Aug 30. From Olympia, sail to Longbranch Marina (15 nm).
- Day 2: Sunday, Aug 31. Sail to Gig Harbor (16 nm). *2*
- Day 3: Monday, Sept 1. Sail to Blake Island (15 nm). *3*
- Day 4: Tuesday, Sept 2. Sail to Kingston (15 nm). *4*

**The Plan**

- Day 1:** Wednesday, Sept. 3. Sail to Port Ludlow or Mats Mats Bay for anchoring out (15 nm) and spend the night.
- Day 2:** Thursday, Sept 4. Sail to Port Townsend (13 nm). *X X X 6*
- Day 3 - 5:** Friday - Sunday, Sept 5 - 7. Attend the Wooden Boat Festival or go sailing. There are lots of nearby and interesting places to sail to: Rat Island, Mystery Bay on Marrowstone Island, Keystone Harbor on Whidbey Island, or around the point to Discovery Bay.
- Day 6:** Monday, Sept 8. Sail to Port Ludlow or Mats Mats Bay (13 nm).
- Day 7:** Tuesday, Sept 9. Sail to Kingston (15 nm). Skippers can either pull out at Kingston or continue on to Gig Harbor (2 days, 30 miles), or Olympia (4 days, 61 nm).

**Option 2:**

- Day 8/12: Wednesday, Sept 10. From Kingston, sail to Blake Island (15 nm).
- Day 9/13: Thursday, Sept 11. Sail to Gig Harbor (15 nm). *See note.*
- Day 10/14: Friday, Sept 12. Sail to Longbranch (16 nm).
- Day 11/15: Saturday, Sept 13. Sail to Olympia (15 nm). *See note.*

**Note:** From Gig Harbor or Olympia, we can arrange transportation back to Kingston to pick up the vehicles.

**DRIVING DIRECTIONS**  
**to**  
**Kingston, Washington**

**Depart** for Kingston, WA, via Portland, OR, Olympia, WA, and Tacoma, WA. The distance to Kingston is approximately 800 miles, 15 hours driving time from the Bay area.

1. **Take I-5 North** approximately 600 miles to the southern edge of Portland, OR.
2. **Stay on I-5 or take I-205 North** (Exit 288) to bypass Portland traffic. Go 37 miles.
3. **Rejoin I-5 North** (Exit 36) - go 96 miles to Olympia WA.
4. **Continue on I-5 North** for 29 miles to Tacoma, WA.
5. **Take Exit 132 (WA- 16)** toward Bremerton, WA.
6. **Take WA-16.** Go 22 miles toward Bremerton to junction with route WA-3.  
(Do not go into Bremerton or Port Orchard and stay on WA-16 until it junctions with WA-3.)
7. **Take WA-3** toward Poulsbo for 18 miles to junction with Hwy 305.
8. **Take Hwy 305.** Turn right onto Hwy 305 and go 1 mile. Turn left onto Bond Rd NE/  
Hwy 307 toward Kingston.
9. **Follow Bond Rd/Hwy 307** for 9 miles into Kingston (Hwy 307 becomes Hwy 104).  
Go straight ahead to Kingston. Marina will be on your left.

**Messabout XII**  
**Stuff to Know**  
**Sept 2014**

**Sailing Conditions:**

**1. General.** While we will be sailing in fairly protected waters, maintain a reasonable caution. Expect currents associated with flood and ebb tides, with two areas of concern: the Port Townsend Canal and the Tacoma Narrows. Be sure to reference the attached tide and current tables. Generally, flood tides are southerly, flowing away from the Straits of San Juan de Fuca. Conversely, ebb tides are northerly, flowing towards the Straits.

**2. Tacoma Narrows.** Sailing the Tacoma Narrows in a microcruiser can be safely done, but attention must be paid to winds and currents. Monitor the weather, check for local knowledge, and use the attached tables for **August** and **September** to determine the best time to shoot the narrows. Do not attempt against a head wind and a counter-current.

**3. Port Townsend Canal.** The dredged channel is relatively narrow and spanned by a bridge with a 58-foot vertical clearance. Currents normally run 2.5 to 3.0 knots. Check the included table and transit on slack water that is followed by a favorable current. For example: on Day 2, Sept. 4, slack water occurs at 11:51 AM with a northerly ebb current until 7 PM.

**4. The Point Wilson Rip.** A very confused piece of water north of Port Townsend at the entrance to Admiralty Inlet, which normally forms on an ebb tide (but not always), and when accompanied by a westerly wind, definitely not good! The Rip can be a factor on a sail around the point to Discovery Bay, or crossing the Straits of San Juan de Fuca.

**Avoid!**

**5. Crossing the Strait of San Juan de Fuca.** Should the urge overcome you, check for local knowledge, monitor the weather closely, and check the Current Atlas, as currents will be a factor. Avoid the Point Wilson Rip. Do not challenge under questionable weather conditions.

**Charts:**

**1.** Waterproof Charts, Puget Sound, #30. (Incorporates parts of NOAA Charts, 18445 with information added for boaters).

**2.** NOAA Chart #18445.

## **Stuff to Know (cont.)**

**Travel to Canada:** While not expected, just in case:

1. The requirements/procedures are the same as last year. Check [www.waggonerguide.com](http://www.waggonerguide.com) or [www.cbp.gov](http://www.cbp.gov) for updates.
2. For Canada, you will need your boat's registration number and the names, citizenship, birth date, and residence of passengers. **Write down your Canadian Clearance Number.** Check [www.cbsa-asfc.gc.ca](http://www.cbsa-asfc.gc.ca) for updates.
3. In Canada, **firearms are not permitted.** Each adult is permitted 40 fluid ounces of liquor, 1.5 liters of wine, or 24 – 12 ounce bottles of beer.
4. For the U.S. you will need a passport(s), boat registration, and the Canadian Clearance Number. To clear through Port Townsend, you must call ahead for an appointment at (360) 385-3777. See [www.portoft.com](http://www.portoft.com) for details.

### **Port Townsend**

Staying at Boat Haven is best, but in decent weather there are many options. Josh Colvin reports that Port Townsend doesn't have fantastic protected anchorages, but depending on wind direction and conditions, there is comfortable anchoring in the area just south of downtown, in the lee of the ferry terminal, with fairly good bottom. It is usual reasonably calm. Usually the anchorages in front of downtown are okay, but monitor the weather.

Another option is to sail up to Fort Worden just north of Port Townsend, toward Point Wilson, where there are designated mooring balls and a little dock inside the tiny protected harbor.

### **Marine Parks:**

**Blake Island Marine State Park.** Located on northeast shore of the island with breakwater protected marina. First come, first served moorage. Fee \$12 per night (dock or buoy). 30 amp power available. A very popular destination, so arrive early as possible.

**Fort Casey State Park.** (360) 331- 4559. Located on Whidbey Island, adjacent to Keystone Harbor on Admiralty Bay (4.5 nm from Port Townsend across Admiralty Inlet). Ferry terminal in harbor and not good for anchoring. Questionable overnighting. Probably best for a day sail from Port Townsend.

## ***Stuff to Know (cont.)***

**Fort Worden Marine State Park.** (360) 385-4730. Located just north of Port Townsend. Restrooms, showers, and laundry, but no power. Use the dock or buoys. While not considered good anchorage, there is a good sand bottom in about three fathoms. Minimum daily fee is \$12.

**Mystery Bay Marine State Park.** Located in Kilisut Harbor on Marrowstone Island, 5 nm south of Port Townsend. First come, first served moorage. Fee \$12 per night (dock or buoy). Toilets, but no showers and power.

### **Marinas:**

**Arabella's Landing,** [www.arabellaslanding.com](http://www.arabellaslanding.com) 3323 Harborview Dr., Gig Harbor, WA 98332. (253) 851-1793. A classy marina. Restrooms, showers, laundry available. Restaurants within easy walking distance. No launch ramp and call for parking. Overnight moorage \$30.

**Longbranch Improvement Club Marina,** [www.longbranchimprovementclub.org](http://www.longbranchimprovementclub.org) Longbranch, WA. (253) 307-1873. First come – first served guest moorage, portable toilets, no showers, no supplies. Moorage fee \$.75 per foot per night, electrical hookups \$4.50, cash or check only.

**Port Hadlock Bay Marina,** 310 Hadlock Bay Rd. Port Hadlock, WA 98339. (360) 385-6368. Restrooms, showers, laundry. No groceries or marine supplies at marina but a general store is nearby. Moorage fee \$1 per foot per night. Limited space, call ahead for availability. Hail on VHF 16, switch to 66A.

**Port of Kingston.** [www.portofkingston.org](http://www.portofkingston.org) 25864 Washington Blvd. Kingston, WA 98346. (360) 297-3545. Launch ramp is free, parking \$8.00 per day, moorage \$1 per foot per night (recommended to call for reservations). Restrooms, free showers, laundry. Nearby shopping and restaurants. Hail on VHF 65A.

**Port of Ludlow Marina.** [www.portludlowresort.com](http://www.portludlowresort.com) 1 Gull Drive, Port Ludlow, WA 98365. (800) 308-7991. Moorage \$25 per night. Full service marina with all the amenities. Reservations recommended. Hail on VHF 68.

**Port Townsend Boat Haven.** [www.portofpt.com](http://www.portofpt.com) 2601 Washington St. Port Townsend, WA, 98368. (800) 228-2803. Full service marina. Launch ramp \$10. Moorage fees vary, depending on what is available. It is first come, first served and there are no reservations. Fills up early for Wooden Boat Show. Hail on VHF 09/16/66A.

**Swantown Marina**, [www.portolympia.com](http://www.portolympia.com) 1022 Marine Drive NE, Olympia, WA. (360) 528-8049. Excellent location and all services available. Launch fee \$5, parking \$3 per night (place receipt on dashboard), moorage \$16.80 per night. Hail on VHF 16/65A.

**Anchorage:**

**Kilisut Harbor.** Potential overnight anchorages, especially if Mystery Bay Marine State Park is full. The entrance into Kilisut is 2nm south of Port Townsend, across Port Townsend Bay, behind Rat island. Check local knowledge.

**Discovery Bay.** Open and unobstructed, but seldom used for overnight anchorages. It is located approximately 5 nm west of Port Townsend, but is approximately a 12 nm sail around Point Wilson.

**Note:**

**Satellite coverage:** Google Earth provides detailed photography of the entire area.



**Messabout XII**  
**Sailing Directions**  
**The Plan**  
**Sept 2014**

**Kingston Marina to Port Ludlow (15 nm) or  
Mats Mats Bay (14.5 nm).**

- Clear the harbor and sail northward for 8 nm to Point No Point.
  - Sail westward 4 nm to clear Foulweather Bluff.
  - Sail southwest for 3 nm to Port Ludlow or west for 3 nm to Mats Mats Bay.
- 

**Port Ludlow to Port Townsend (13 nm) via  
The Port Townsend Canal.**

- Clear the marina and sail northward for 7 nm to enter the Port Townsend Canal. Enter the Canal on slackwater that is followed by an ebb tide. For example, on Sept 4, slack water occurs at 11:51 AM with a northerly ebb current until 7 PM.
  - Plan on motoring through the canal, which is approximately .75 nm long. The canal is spanned by a bridge with 58 feet vertical clearance.
  - Sail northward for 5 nm to Port Townsend.
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**Sailing the Port Townsend area.**

- Nearby destinations, Rat Island, Mystery Bay, or Keystone Harbor are all within 5 nm.
  - Check for local knowledge and tidal currents.
  - Use your GPS for point-to-point navigation.
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**Sailing Directions**  
**The Plan**  
**(cont.)**

**Port Townsend to Port Ludlow (13 nm) via  
The Port Townsend Canal.**

- Sail southward for 5 nm to enter the Port Townsend Canal. Enter on a slack water that is followed by a flood tide. For example, on Sept 8, slack water occurs at 9:37 AM with a southerly flood current until 3:09 PM.
- Plan on motoring through the canal, which is approximately .75 nm long. The canal is spanned by a bridge with 58 feet vertical clearance.
- Sail southward for 7 nm to Port Ludlow.

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**Port Ludlow to Kingston Marina (15 nm).**

- Clear marina and sail northeast 3 nm to Foulmouth Bluff.
  - Sail eastward for 4 nm to clear Point No Point.
  - Sail southward for 8 nm to Kingstone.
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**Messabout XII**  
**Sailing Directions**  
**Option One**  
**Sept 2014**



**Swantown Marina to Longbranch (15 nm).**

- Clear marina and sail north 5 nm (to clear Budd Inlet) to Boston Harbor.
  - Sail northeast 4.5 nm to clear Johnson Point.
  - Sail east 2 nm to clear Devil's Head.
  - Sail northward for 3.5 nm to Longbranch Marina.
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**Longbranch Marina to Gig Harbor (16.5 nm).**

- Clear Marina and sail east-north-east 3.5 nm into Balch Passage (between McNeil and Anderson Islands).
  - Sail northward 12 nm to enter the Tacoma Narrows and then to Gig Harbor.
  - Enter Gig Harbor and sail approximately 1 nm to Arabella's Marina.
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**Gig Harbor to Blake Island (14.5 nm)**

- Clear Gig Harbor (1 nm)
  - Sail northward 13.5 nm through Colvos Passage to Blake Island. The State Park is on the northeast end of Blake Island.
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**Blake Island to Kingston (15 nm)**

- Sail northward 15 nm in Puget Sound, past Bainbridge Island, to Kingston. Monitor shipping and avoid Southbound Puget Sound Traffic Lane.
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**Messabout XII**  
***Sailing Directions***  
**Option Two**  
**Sept 2014**

**Kingston to Blake Island (15 nm)**

- Clear the Marina and sail southward 15 nm in Puget Sound, past Bainbridge Island, to Blake Island. Monitor shipping and avoid Southbound Puget Sound Traffic Lane.

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**Blake Island to Gig Harbor (14.5 nm)**

- Clear the northeastern tip of Blake Island and sail southward 13.5 nm through Colvos Passage to Gig Harbor entrance.

- Enter Gig Harbor and sail 1 nm to Arabella's Landing.

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**Gig Harbor to Longbranch Marina (16.5 nm).**

- Clear Gig Harbor (1 nm).

- Sail southward 12 nm through the Tacoma Narrows to Balch Passage (between McNeil and Anderson Islands).

- Sail west-south-west 3.5 nm into Balch Passage to Longbranch Marina.

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**Longbranch Marina to Swantown Marina (15 nm).**

- Clear marina and sail southward 3.5 nm to Devil's Head.

- Sail west for 2 nm to clear Johnson Point.

- Sail southwest for 4.5 nm to Boston Harbor.

- Sail southward 5 nm into Budd Inlet to Swantown Marina.

## GPS Coordinates

(degrees-minutes-seconds)

### Balch Passage (Waypoint)

47-11-00N  
122-40-00W

### Blake Island (State Park)

47-32-38N  
122-29-00W

### Boston Harbor (Waypoint)

47-08-37N  
122-54-30W

### Fort Worden (State Park)

48-08-08N  
122-45-36W

### Foulmouth Bluff (Waypoint)

47-56-40N  
122-37-00W

### Gig Harbor (Entrance)

47-19-30N  
122-34-30W

### Johnston Point (Waypoint)

47-11-00N  
122-49-00W

### Longbranch Marina

47-12-35N  
122-45-10W

### Keystone Harbor, Whidbey Island (Entrance)

48-09-23N  
122-40-15W

### Kingston Marina

47-47-35N  
122-29-50W

### Mats Mats Bay (Entrance)

47-57-46N  
122-40-45W

### Mystery Bay, Marrowstone, Island (State Park)

48-03-23N  
122-42-05W

### Port Hadlock Marina

48-01-55N  
122-44-45W

### Port Ludlow Marina

47-55-18N  
122-41-06W

### Port Townsend (Boat Haven)

48-06-26N  
122-46-12W

### Port Townsend Canal (Mid point)

48-01-43N  
122-43-42W

### Rat Island, Kilisut Bay (Entrance)

48-05-00N  
122-44-20W

### Swantown Marina (Olympia)

47-03-32N  
122-53-47W

### Tacoma Narrows Bridge (Waypoint)

47-16-00N  
122-33-00W

Ch Cole

# Tides for Port Townsend

September 1- 28, 2014

Day		High /Low	Tide Time	Height Feet	Sunrise Sunset	Moon Time	% Moon Visible
M	1	Low	3:11 AM	0.9	6:29 AM 7:52 PM	Rise 1:51 PM Set 11:26 PM	33
	1	High	10:35 AM	6.4			
	1	Low	3:05 PM	5.1			
	1	High	9:14 PM	7.6			
Tu	2	Low	4:08 AM	0.5	6:31 AM 7:50 PM	Rise 2:53 PM	43
	2	High	12:12 PM	6.5			
	2	Low	4:14 PM	5.7			
	2	High	9:58 PM	7.5			
W	3	Low	5:09 AM	0.2	6:32 AM 7:48 PM	Set 12:16 AM Rise 3:50 PM	54
	3	High	1:43 PM	6.9			
	3	Low	5:35 PM	5.9			
	3	High	10:55 PM	7.4			
Th	4	Low	6:11 AM	-0.2	6:33 AM 7:46 PM	Set 1:15 AM Rise 4:42 PM	65
	4	High	2:39 PM	7.3			
	4	Low	6:49 PM	5.7			
F	5	High	12:04 AM	7.4	6:35 AM 7:44 PM	Set 2:22 AM Rise 5:28 PM	75
	5	Low	7:11 AM	-0.5			
	5	High	3:19 PM	7.7			
	5	Low	7:50 PM	5.2			
Sa	6	High	1:17 AM	7.5	6:36 AM 7:42 PM	Set 3:35 AM Rise 6:09 PM	85
	6	Low	8:05 AM	-0.7			
	6	High	3:53 PM	8.0			
	6	Low	8:41 PM	4.5			
Su	7	High	2:28 AM	7.7	6:37 AM 7:40 PM	Set 4:52 AM Rise 6:45 PM	92
	7	Low	8:56 AM	-0.6			
	7	High	4:26 PM	8.3			
	7	Low	9:29 PM	3.6			
M	8	High	3:34 AM	7.9	6:39 AM 7:38 PM	Set 6:11 AM Rise 7:18 PM	97
	8	Low	9:44 AM	-0.3			
	8	High	4:57 PM	8.5			
	8	Low	10:16 PM	2.6			
Tu	9	High	4:37 AM	8.0	6:40 AM 7:36 PM	Set 7:29 AM Rise 7:50 PM	99
	9	Low	10:30 AM	0.3			
	9	High	5:30 PM	8.6			
	9	Low	11:02 PM	1.7			

## Tides for Port Townsend (cont.)

Day		High /Low	Tide Time	Height Feet	Sunrise Sunset	Moon	Time	% Moon Visible
W	10	High	5:37 AM	8.0	6:42 AM	Set	8:47 AM	99
	10	Low	11:16 AM	1.2	7:34 PM	Rise	8:22 PM	
	10	High	6:03 PM	8.7				
	10	Low	11:49 PM	0.9				
Th	11	High	6:38 AM	7.9	6:43 AM	Set	10:02 AM	95
	11	Low	12:02 PM	2.1	7:32 PM	Rise	8:56 PM	
	11	High	6:37 PM	8.6				
F	12	Low	12:38 AM	0.4	6:44 AM	Set	11:14 AM	89
	12	High	7:41 AM	7.7	7:30 PM	Rise	9:32 PM	
	12	Low	12:51 PM	3.2				
	12	High	7:13 PM	8.4				
Sa	13	Low	1:28 AM	0.2	6:46 AM	Set	12:22 PM	81
	13	High	8:47 AM	7.5	7:28 PM	Rise	10:12 PM	
	13	Low	1:44 PM	4.1				
	13	High	7:51 PM	8.1				
Su	14	Low	2:20 AM	0.2	6:47 AM	Set	1:24 PM	72
	14	High	10:02 AM	7.3	7:25 PM	Rise	10:56 PM	
	14	Low	2:46 PM	4.9				
	14	High	8:32 PM	7.7				
M	15	Low	3:17 AM	0.4	6:48 AM	Set	2:20 PM	62
	15	High	11:28 AM	7.3	7:23 PM	Rise	11:44 PM	
	15	Low	4:03 PM	5.5				
	15	High	9:18 PM	7.2				
Tu	16	Low	4:19 AM	0.7	6:50 AM	Set	3:09 PM	52
	16	High	12:51 PM	7.5	7:21 PM			
	16	Low	5:43 PM	5.7				
	16	High	10:13 PM	6.8				
W	17	Low	5:25 AM	1.0	6:51 AM	Rise	12:36 AM	42
	17	High	1:57 PM	7.7	7:19 PM	Set	3:51 PM	
	17	Low	7:14 PM	5.4				
	17	High	11:22 PM	6.5				
Th	18	Low	6:30 AM	1.2	6:53 AM	Rise	1:31 AM	33
	18	High	2:46 PM	7.8	7:17 PM	Set	4:28 PM	
	18	Low	8:13 PM	5.1				
F	19	High	12:40 AM	6.3	6:54 AM	Rise	2:29 AM	24
	19	Low	7:28 AM	1.4	7:15 PM	Set	5:00 PM	
	19	High	3:25 PM	7.9				
	19	Low	8:52 PM	4.6				

## Tides for Port Townsend (cont.)

Day		High /Low	Tide Time	Height Feet	Sunrise Sunset	Moon Rise Set	Time	% Moon Visible
Sa	20	High	1:53 AM	6.4	6:55 AM	Rise	3:27 AM	16
	20	Low	8:16 AM	1.5	7:13 PM	Set	5:29 PM	
	20	High	3:54 PM	7.9				
	20	Low	9:20 PM	4.1				
Su	21	High	2:52 AM	6.6	6:57 AM	Rise	4:27 AM	10
	21	Low	8:57 AM	1.7	7:11 PM	Set	5:56 PM	
	21	High	4:16 PM	7.8				
	21	Low	9:44 PM	3.5				
M	22	High	3:41 AM	6.9	6:58 AM	Rise	5:27 AM	5
	22	Low	9:33 AM	1.9	7:09 PM	Set	6:21 PM	
	22	High	4:34 PM	7.8				
	22	Low	10:08 PM	2.9				
Tu	23	High	4:26 AM	7.1	6:59 AM	Rise	6:28 AM	1
	23	Low	10:07 AM	2.3	7:07 PM	Set	6:47 PM	
	23	High	4:51 PM	7.8				
	23	Low	10:35 PM	2.3				
W	24	High	5:09 AM	7.3	7:01 AM	Rise	7:30 AM	0
	24	Low	10:41 AM	2.7	7:05 PM	Set	7:12 PM	
	24	High	5:12 PM	7.9				
	24	Low	11:05 PM	1.7				
Th	25	High	5:52 AM	7.4	7:02 AM	Rise	8:33 AM	0
	25	Low	11:16 AM	3.2	7:03 PM	Set	7:40 PM	
	25	High	5:37 PM	7.9				
	25	Low	11:38 PM	1.1				
F	26	High	6:38 AM	7.5	7:04 AM	Rise	9:37 AM	2
	26	Low	11:52 AM	3.8	7:00 PM	Set	8:10 PM	
	26	High	6:05 PM	7.9				
Sa	27	Low	12:14 AM	0.6	7:05 AM	Rise	10:41 AM	6
	27	High	7:26 AM	7.6	6:58 PM	Set	8:45 PM	
	27	Low	12:31 PM	4.4				
	27	High	6:36 PM	7.8				
Su	28	Low	12:54 AM	0.2	7:06 AM	Rise	11:44 AM	12
	28	High	8:20 AM	7.6	6:56 PM	Set	9:25 PM	
	28	Low	1:14 PM	4.9				
	28	High	7:08 PM	7.6				



# PORT TOWNSEND CANAL TIDES & CURRENTS

September 2014

Flood Direction: 135° Magnetic

Ebb Direction: 305° Magnetic

Day	Slack	Flood	Slack	Ebb	Slack	Flood	Slack	Ebb	Slack	Flood	Slack	Moon	Sunrise	Sunset
Mon 1	2:10 AM PDT	5:00 AM PDT / 2.64 kt	7:58 AM PDT	11:18 AM PDT / -2.34 kt	2:37 PM PDT	5:16 PM PDT / 2.07 kt	7:30 PM PDT	11:30 PM PDT / -2.53 kt					6:28 AM PDT	7:51 PM PDT
Tue 2	2:57 AM PDT	5:56 AM PDT / 2.52 kt	9:06 AM PDT	12:17 PM PDT / -2.17 kt	3:43 PM PDT	6:16 PM PDT / 1.78 kt	8:19 PM PDT					First Quarter	6:30 AM PDT	7:49 PM PDT
Wed 3				12:29 AM PDT / -2.41 kt	3:59 AM PDT	7:00 AM PDT / 2.47 kt	10:31 AM PDT	1:25 PM PDT / -2.10 kt	5:31 PM PDT	7:25 PM PDT / 1.64 kt	9:30 PM PDT		6:31 AM PDT	7:47 PM PDT
Thu 4				1:35 AM PDT / -2.37 kt	5:19 AM PDT	8:09 AM PDT / 2.55 kt	11:51 AM PDT	2:36 PM PDT / -2.19 kt	7:07 PM PDT	8:37 PM PDT / 1.77 kt	11:05 PM PDT		6:33 AM PDT	7:45 PM PDT
Fri 5				2:44 AM PDT / -2.45 kt	6:43 AM PDT	9:15 AM PDT / 2.75 kt	12:54 PM PDT	3:42 PM PDT / -2.41 kt	8:08 PM PDT	9:43 PM PDT / 2.11 kt			6:34 AM PDT	7:43 PM PDT
Sat 6			12:30 AM PDT	3:49 AM PDT / -2.64 kt	7:51 AM PDT	10:15 AM PDT / 3.00 kt	1:45 PM PDT	4:39 PM PDT / -2.68 kt	8:56 PM PDT	10:40 PM PDT / 2.52 kt			6:35 AM PDT	7:41 PM PDT
Sun 7			1:35 AM PDT	4:47 AM PDT / -2.86 kt	8:47 AM PDT	11:06 AM PDT / 3.23 kt	2:29 PM PDT	5:28 PM PDT / -2.94 kt	9:37 PM PDT	11:31 PM PDT / 2.89 kt			6:37 AM PDT	7:39 PM PDT
Mon 8			2:29 AM PDT	5:40 AM PDT / -3.06 kt	9:37 AM PDT	11:53 AM PDT / 3.40 kt	3:09 PM PDT	6:13 PM PDT / -3.14 kt	10:17 PM PDT			Full Moon	6:38 AM PDT	7:37 PM PDT
Tue 9		12:17 AM PDT / 3.19 kt	3:18 AM PDT	6:28 AM PDT / -3.20 kt	10:23 AM PDT	12:38 PM PDT / 3.49 kt	3:48 PM PDT	6:55 PM PDT / -3.27 kt	10:55 PM PDT				6:39 AM PDT	7:35 PM PDT
Wed 10		1:01 AM PDT / 3.39 kt	4:05 AM PDT	7:14 AM PDT / -3.26 kt	11:08 AM PDT	1:21 PM PDT / 3.49 kt	4:25 PM PDT	7:37 PM PDT / -3.33 kt	11:33 PM PDT				6:41 AM PDT	7:33 PM PDT
Thu 11		1:45 AM PDT / 3.49 kt	4:51 AM PDT	7:59 AM PDT / -3.25 kt	11:51 AM PDT	2:03 PM PDT / 3.39 kt	5:02 PM PDT	8:18 PM PDT / -3.32 kt					6:42 AM PDT	7:31 PM PDT
Fri 12	12:12 AM PDT	2:29 AM PDT / 3.49 kt	5:38 AM PDT	8:45 AM PDT / -3.15 kt	12:35 PM PDT	2:47 PM PDT / 3.19 kt	5:39 PM PDT	9:01 PM PDT / -3.23 kt					6:43 AM PDT	7:29 PM PDT
Sat 13	12:52 AM PDT	3:15 AM PDT / 3.38 kt	6:27 AM PDT	9:31 AM PDT / -2.98 kt	1:22 PM PDT	3:32 PM PDT / 2.91 kt	6:17 PM PDT	9:45 PM PDT / -3.07 kt					6:45 AM PDT	7:27 PM PDT
Sun 14	1:35 AM PDT	4:02 AM PDT / 3.19 kt	7:20 AM PDT	10:20 AM PDT / -2.74 kt	2:14 PM PDT	4:20 PM PDT / 2.55 kt	6:58 PM PDT	10:32 PM PDT / -2.85 kt					6:46 AM PDT	7:25 PM PDT
Mon 15	2:23 AM PDT	4:55 AM PDT / 2.94 kt	8:21 AM PDT	11:15 AM PDT / -2.48 kt	3:20 PM PDT	5:15 PM PDT / 2.16 kt	7:48 PM PDT	11:26 PM PDT / -2.59 kt				Last Quarter	6:48 AM PDT	7:22 PM PDT

# PORT TOWNSEND CANAL TIDES & CURRENTS (cont.)

September 2014

Flood Direction: 135° Magnetic

Ebb Direction: 305° Magnetic

Day	Slack	Flood	Slack	Ebb	Slack	Flood	Slack	Ebb	Slack	Flood	Slack	Moon	Sunrise	Sunset
Tue 16	3:22 AM PDT	5:54 AM PDT / 2.68 kt	9:34 AM PDT	12:17 PM PDT / -2.24 kt	4:47 PM PDT	6:19 PM PDT / 1.81 kt	8:57 PM PDT						6:49 AM PDT	7:20 PM PDT
Wed 17				12:28 AM PDT / -2.36 kt	4:39 AM PDT	7:02 AM PDT / 2.48 kt	10:51 AM PDT	1:29 PM PDT / -2.11 kt	6:16 PM PDT	7:33 PM PDT / 1.65 kt	10:33 PM PDT		6:50 AM PDT	7:18 PM PDT
Thu 18				1:38 AM PDT / -2.22 kt	6:02 AM PDT	8:16 AM PDT / 2.44 kt	12:01 PM PDT	2:53 PM PDT / -2.16 kt	7:26 PM PDT	8:55 PM PDT / 1.78 kt	11:58 PM PDT		6:52 AM PDT	7:16 PM PDT
Fri 19				2:52 AM PDT / -2.24 kt	7:13 AM PDT	9:27 AM PDT / 2.54 kt	12:58 PM PDT	4:08 PM PDT / -2.35 kt	8:18 PM PDT	10:03 PM PDT / 2.09 kt			6:53 AM PDT	7:14 PM PDT
Sat 20			1:02 AM PDT	3:59 AM PDT / -2.39 kt	8:09 AM PDT	10:21 AM PDT / 2.71 kt	1:43 PM PDT	4:51 PM PDT / -2.56 kt	9:00 PM PDT	10:50 PM PDT / 2.41 kt			6:54 AM PDT	7:12 PM PDT
Sun 21			1:52 AM PDT	4:50 AM PDT / -2.57 kt	8:56 AM PDT	11:04 AM PDT / 2.87 kt	2:22 PM PDT	5:25 PM PDT / -2.73 kt	9:35 PM PDT	11:27 PM PDT / 2.68 kt			6:56 AM PDT	7:10 PM PDT
Mon 22			2:34 AM PDT	5:32 AM PDT / -2.73 kt	9:36 AM PDT	11:41 AM PDT / 2.99 kt	2:56 PM PDT	5:57 PM PDT / -2.88 kt	10:07 PM PDT				6:57 AM PDT	7:08 PM PDT
Tue 23		12:02 AM PDT / 2.90 kt	3:11 AM PDT	6:09 AM PDT / -2.86 kt	10:12 AM PDT	12:16 PM PDT / 3.06 kt	3:27 PM PDT	6:29 PM PDT / -2.98 kt	10:35 PM PDT			New Moon	6:59 AM PDT	7:06 PM PDT
Wed 24		12:36 AM PDT / 3.06 kt	3:46 AM PDT	6:46 AM PDT / -2.94 kt	10:45 AM PDT	12:50 PM PDT / 3.08 kt	3:55 PM PDT	7:02 PM PDT / -3.04 kt	11:01 PM PDT				7:00 AM PDT	7:04 PM PDT
Thu 25		1:10 AM PDT / 3.16 kt	4:19 AM PDT	7:22 AM PDT / -2.97 kt	11:17 AM PDT	1:24 PM PDT / 3.03 kt	4:20 PM PDT	7:36 PM PDT / -3.05 kt	11:26 PM PDT				7:01 AM PDT	7:02 PM PDT
Fri 26		1:45 AM PDT / 3.20 kt	4:51 AM PDT	7:59 AM PDT / -2.95 kt	11:47 AM PDT	2:00 PM PDT / 2.91 kt	4:45 PM PDT	8:10 PM PDT / -3.02 kt	11:50 PM PDT				7:03 AM PDT	7:00 PM PDT
Sat 27		2:22 AM PDT / 3.18 kt	5:25 AM PDT	8:38 AM PDT / -2.87 kt	12:18 PM PDT	2:36 PM PDT / 2.73 kt	5:09 PM PDT	8:46 PM PDT / -2.94 kt					7:04 AM PDT	6:58 PM PDT
Sun 28	12:17 AM PDT	3:00 AM PDT / 3.10 kt	6:02 AM PDT	9:18 AM PDT / -2.75 kt	12:53 PM PDT	3:15 PM PDT / 2.49 kt	5:37 PM PDT	9:24 PM PDT / -2.81 kt					7:06 AM PDT	6:56 PM PDT
Mon 29	12:50 AM PDT	3:42 AM PDT / 2.97 kt	6:44 AM PDT	10:03 AM PDT / -2.59 kt	1:34 PM PDT	3:58 PM PDT / 2.20 kt	6:11 PM PDT	10:06 PM PDT / -2.65 kt					7:07 AM PDT	6:53 PM PDT
Tue 30	1:28 AM PDT	4:29 AM PDT / 2.81 kt	7:36 AM PDT	10:55 AM PDT / -2.41 kt	2:28 PM PDT	4:50 PM PDT / 1.88 kt	6:53 PM PDT	10:58 PM PDT / -2.47 kt					7:09 AM PDT	6:51 PM PDT

# ADMIRALTY INLET

## TIDES

September 2014

Flood Direction: southerly

Ebb Direction: northerly

Day	Slack	Flood	Slack	Ebb	Slack	Flood	Slack	Ebb	Slack	Flood	Slack	Moon	Sunrise	Sunset
Wed 3				3:05 AM PDT / -2.74 kt	7:09 AM PDT	10:08 AM PDT / 1.68 kt	1:24 PM PDT	4:28 PM PDT / -1.43 kt	8:02 PM PDT	9:50 PM PDT / 0.49 kt	11:30 PM PDT		6:31 AM PDT	7:47 PM PDT
Thu 4				4:13 AM PDT / -2.84 kt	8:10 AM PDT	11:14 AM PDT / 1.93 kt	2:31 PM PDT	5:38 PM PDT / -1.69 kt	9:11 PM PDT	11:05 PM PDT / 0.63 kt			6:32 AM PDT	7:45 PM PDT
Fri 5			12:52 AM PDT	5:21 AM PDT / -3.01 kt	9:08 AM PDT	12:13 PM PDT / 2.23 kt	3:27 PM PDT	6:36 PM PDT / -2.08 kt	10:06 PM PDT				6:34 AM PDT	7:43 PM PDT
Sat 6		12:13 AM PDT / 0.95 kt	2:14 AM PDT	6:24 AM PDT / -3.23 kt	10:03 AM PDT	1:06 PM PDT / 2.51 kt	4:15 PM PDT	7:27 PM PDT / -2.52 kt	10:54 PM PDT				6:35 AM PDT	7:41 PM PDT
Sun 7		1:13 AM PDT / 1.37 kt	3:28 AM PDT	7:22 AM PDT / -3.43 kt	10:54 AM PDT	1:54 PM PDT / 2.70 kt	4:57 PM PDT	8:13 PM PDT / -2.95 kt	11:39 PM PDT				6:36 AM PDT	7:39 PM PDT
Mon 8		2:08 AM PDT / 1.79 kt	4:34 AM PDT	8:16 AM PDT / -3.54 kt	11:44 AM PDT	2:40 PM PDT / 2.78 kt	5:37 PM PDT	8:57 PM PDT / -3.31 kt				Full Moon	6:38 AM PDT	7:37 PM PDT
Tue 9	12:23 AM PDT	3:00 AM PDT / 2.16 kt	5:36 AM PDT	9:07 AM PDT / -3.52 kt	12:32 PM PDT	3:24 PM PDT / 2.72 kt	6:15 PM PDT	9:40 PM PDT / -3.57 kt					6:39 AM PDT	7:34 PM PDT
Wed 10	1:08 AM PDT	3:50 AM PDT / 2.41 kt	6:34 AM PDT	9:58 AM PDT / -3.38 kt	1:20 PM PDT	4:07 PM PDT / 2.52 kt	6:52 PM PDT	10:23 PM PDT / -3.70 kt					6:40 AM PDT	7:33 PM PDT
Thu 11	1:53 AM PDT	4:40 AM PDT / 2.52 kt	7:31 AM PDT	10:48 AM PDT / -3.10 kt	2:08 PM PDT	4:50 PM PDT / 2.21 kt	7:28 PM PDT	11:06 PM PDT / -3.68 kt					6:42 AM PDT	7:31 PM PDT
Fri 12	2:41 AM PDT	5:30 AM PDT / 2.48 kt	8:27 AM PDT	11:39 AM PDT / -2.74 kt	2:59 PM PDT	5:34 PM PDT / 1.82 kt	8:04 PM PDT	11:51 PM PDT / -3.53 kt					6:43 AM PDT	7:29 PM PDT
Sat 13	3:31 AM PDT	6:23 AM PDT / 2.33 kt	9:25 AM PDT	12:33 PM PDT / -2.33 kt	3:55 PM PDT	6:20 PM PDT / 1.39 kt	8:40 PM PDT						6:44 AM PDT	7:26 PM PDT
Sun 14				12:38 AM PDT / -3.28 kt	4:26 AM PDT	7:19 AM PDT / 2.10 kt	10:26 AM PDT	1:32 PM PDT / -1.95 kt	4:59 PM PDT	7:12 PM PDT / 0.97 kt	9:18 PM PDT		6:46 AM PDT	7:24 PM PDT
Mon 15				1:31 AM PDT / -2.98 kt	5:24 AM PDT	8:21 AM PDT / 1.86 kt	11:32 AM PDT	2:39 PM PDT / -1.67 kt	6:16 PM PDT	8:11 PM PDT / 0.62 kt	10:01 PM PDT	Last Quarter	6:47 AM PDT	7:22 PM PDT
Tue 16				2:30 AM PDT / -2.69 kt	6:28 AM PDT	9:27 AM PDT / 1.69 kt	12:40 PM PDT	3:53 PM PDT / -1.55 kt	7:43 PM PDT	9:21 PM PDT / 0.40 kt	10:55 PM PDT		6:49 AM PDT	7:20 PM PDT
Wed 17				3:36 AM PDT / -2.47 kt	7:33 AM PDT	10:34 AM PDT / 1.62 kt	1:45 PM PDT	5:04 PM PDT / -1.62 kt	9:01 PM PDT	10:36 PM PDT / 0.37 kt			6:50 AM PDT	7:18 PM PDT
Thu 18			12:06 AM PDT	4:44 AM PDT / -2.38 kt	8:35 AM PDT	11:35 AM PDT / 1.65 kt	2:41 PM PDT	6:04 PM PDT / -1.81 kt	9:58 PM PDT	11:43 PM PDT / 0.51 kt			6:51 AM PDT	7:16 PM PDT
Fri 19			1:25 AM PDT	5:46 AM PDT / -2.39 kt	9:29 AM PDT	12:27 PM PDT / 1.73 kt	3:27 PM PDT	6:52 PM PDT / -2.05 kt	10:39 PM PDT				6:53 AM PDT	7:14 PM PDT
Sat 20		12:39 AM PDT / 0.74 kt	2:36 AM PDT	6:40 AM PDT / -2.46 kt	10:15 AM PDT	1:10 PM PDT / 1.81 kt	4:06 PM PDT	7:32 PM PDT / -2.29 kt	11:14 PM PDT				6:54 AM PDT	7:12 PM PDT
Sun 21		1:26 AM PDT / 1.00 kt	3:36 AM PDT	7:26 AM PDT / -2.54 kt	10:57 AM PDT	1:48 PM PDT / 1.86 kt	4:39 PM PDT	8:07 PM PDT / -2.51 kt	11:45 PM PDT				6:56 AM PDT	7:10 PM PDT
Mon 22		2:06 AM PDT / 1.26 kt	4:27 AM PDT	8:07 AM PDT / -2.59 kt	11:35 AM PDT	2:23 PM PDT / 1.87 kt	5:09 PM PDT	8:39 PM PDT / -2.70 kt					6:57 AM PDT	7:08 PM PDT

## THE TACOMA NARROWS

**NOTE:** Sailing the Tacoma Narrows in a microcruiser can be safely done, but attention must be paid to winds and currents. Monitor the weather, check for local knowledge, and use the attached tables for **August** and **September** to determine the best time to shoot the narrows. Do not attempt against a head wind and a counter-current.

### TACOMA NARROWS CURRENTS (north end, midstream)

**August 2014**

Flood Direction (+): 120° Magnetic

Ebb Direction (-): 315° Magnetic

	Turn	Max	Turn	Max	Turn	Units are knots	
<b>Time Zone is PDT</b>							
Thu 21 Aug	02:34	06:50 -3.0E	09:52	12:59 3.3F	17:04		
		20:09 -1.9E	22:29				
Fri 22 Aug		00:46 1.8F	03:36	07:45 -3.1E	10:43		
		13:49 3.5F	17:47	20:55 -2.2E	23:19		
<b>Sat 23 Aug</b>		01:40 2.0F	04:31	08:30 -3.2E	11:29		
		14:31 3.6F	18:22	21:34 -2.4E			
<b>Sun 24 Aug</b>	00:03	02:27 2.2F	05:20	09:08 -3.3E	12:10		
		15:08 3.8F	18:53	22:06 -2.5E			
Mon 25 Aug ●	00:43	03:09 2.5F	06:05	09:40 -3.3E	12:49		
		15:43 3.8F	19:20	22:30 -2.6E			
Tue 26 Aug	01:20	03:49 2.8F	06:47	10:09 -3.3E	13:26		
		16:17 3.8F	19:46	22:49 -2.8E			
Wed 27 Aug	01:55	04:28 3.0F	07:27	10:39 -3.2E	14:02		
		16:51 3.8F	20:11	23:10 -2.9E			
Thu 28 Aug	02:29	05:07 3.2F	08:08	11:11 -3.0E	14:36		
		17:27 3.6F	20:36	23:35 -3.0E			
Fri 29 Aug	03:03	05:48 3.3F	08:51	11:46 -2.8E	15:11		
		18:04 3.3F	21:01				
<b>Sat 30 Aug</b>		00:05 -3.1E	03:38	06:30 3.3F	09:37		
		12:25 -2.5E	15:48	18:43 3.0F	21:29		
<b>Sun 31 Aug</b>		00:39 -3.1E	04:17	07:16 3.3F	10:28		
		13:08 -2.1E	16:29	19:26 2.6F	22:01		

Source:  
[www.dairiki.org/tides/monthly.php/nar/2014-08](http://www.dairiki.org/tides/monthly.php/nar/2014-08)

# TACOMA NARROWS CURRENTS (north end, midstream)

September 2014

Flood Direction (+): 120° Magnetic

Ebb Direction (-): 315° Magnetic

	Turn	Max	Turn	Max	Turn	Max	Turn
<b>Time Zone is PDT</b>					<b>Units are knots</b>		
Mon 01 Sep		01:19 -3.1E	05:02	08:06	3.3F	11:27	
		13:59 -1.8E	17:19	20:13	2.2F	22:39	
Tue 02 Sep ☉		02:05 -3.0E	05:55	09:02	3.3F	12:36	
		15:00 -1.5E	18:23	21:07	1.9F	23:26	
Wed 03 Sep		03:01 -3.0E	06:56	10:03	3.3F	13:52	
		16:15 -1.3E	19:38	22:07	1.8F		
Thu 04 Sep	00:25	04:07 -3.0E	08:02	11:06	3.5F	15:04	
		17:43 -1.4E	20:50	23:11	1.9F		
Fri 05 Sep	01:36	05:19 -3.2E	09:06	12:09	3.8F	16:04	
		19:00 -1.9E	21:53				
<b>Sat 06 Sep</b>		00:15 2.2F	02:52	06:30	-3.5E	10:07	
		13:07 4.2F	16:54	19:55	-2.4E	22:48	
<b>Sun 07 Sep</b>		01:16 2.7F	04:04	07:36	-3.8E	11:03	
		14:01 4.5F	17:38	20:40	-3.0E	23:38	
Mon 08 Sep ☉		02:13 3.4F	05:10	08:35	-4.1E	11:55	
		14:50 4.7F	18:18	21:22	-3.5E		
Tue 09 Sep	00:25	03:07 3.9F	06:11	09:29	-4.2E	12:45	
		15:37 4.7F	18:56	22:02	-3.9E		
Wed 10 Sep	01:11	03:58 4.4F	07:09	10:19	-4.2E	13:34	
		16:21 4.5F	19:33	22:42	-4.2E		
Thu 11 Sep	01:57	04:47 4.7F	08:05	11:08	-3.9E	14:21	
		17:05 4.2F	20:10	23:23	-4.3E		
Fri 12 Sep	02:43	05:36 4.7F	09:00	11:58	-3.5E	15:09	
		17:50 3.8F	20:48				
<b>Sat 13 Sep</b>		00:05 -4.2E	03:32	06:26	4.5F	09:57	
		12:49 -2.9E	15:59	18:35	3.3F	21:27	

Source:  
[www.dairiki.org/tides/monthly.php/nar/2014-09](http://www.dairiki.org/tides/monthly.php/nar/2014-09)

# TACOMA NARROWS CURRENTS

## (north end, midstream)

September 2014

Flood Direction (+): 120° Magnetic

Ebb Direction (-): 315° Magnetic

	Turn	Max	Turn	Max	Turn	
<b>Time Zone is PDT</b>						<b>Units are knots</b>
<b>Sun 14 Sep</b>		00:49 -3.9E	04:22	07:16	4.2F	10:56
		13:44 -2.4E	16:52	19:23	2.7F	22:09
Mon 15 Sep ☉		01:37 -3.5E	05:16	08:10	3.8F	12:00
		14:52 -1.9E	17:51	20:14	2.2F	22:57
Tue 16 Sep		02:31 -3.0E	06:14	09:08	3.4F	13:09
		16:20 -1.6E	18:57	21:11	1.8F	23:53
Wed 17 Sep		03:38 -2.7E	07:16	10:11	3.1F	14:21
		17:42 -1.6E	20:05	22:14	1.6F	
Thu 18 Sep	01:00	05:04 -2.5E	08:18	11:16	2.9F	15:24
		18:46 -1.8E	21:09	23:20	1.6F	
Fri 19 Sep	02:14	06:23 -2.5E	09:17	12:17	3.0F	16:16
		19:38 -2.0E	22:04			
<b>Sat 20 Sep</b>		00:24 1.8F	03:23	07:23	-2.6E	10:11
		13:10 3.1F	16:57	20:20	-2.3E	22:51
<b>Sun 21 Sep</b>		01:19 2.1F	04:23	08:11	-2.8E	10:59
		13:53 3.2F	17:31	20:55	-2.6E	23:32
Mon 22 Sep		02:05 2.5F	05:14	08:50	-2.9E	11:43
		14:32 3.4F	18:01	21:23	-2.8E	
Tue 23 Sep ●	00:10	02:47 3.0F	05:59	09:23	-3.0E	12:24
		15:08 3.4F	18:29	21:44	-3.0E	
Wed 24 Sep	00:46	03:26 3.3F	06:41	09:54	-3.0E	13:02
		15:43 3.4F	18:54	22:04	-3.1E	
Thu 25 Sep	01:19	04:05 3.6F	07:22	10:23	-3.0E	13:40
		16:19 3.3F	19:20	22:28	-3.3E	
Fri 26 Sep	01:52	04:43 3.9F	08:02	10:55	-2.8E	14:16
		16:55 3.1F	19:45	22:55	-3.4E	
<b>Sat 27 Sep</b>	02:25	05:23 4.0F	08:44	11:30	-2.7E	14:54
		17:33 2.9F	20:12	23:27	-3.5E	
<b>Sun 28 Sep</b>	02:59	06:05 4.0F	09:28	12:09	-2.5E	15:34
		18:14 2.6F	20:43			
Mon 29 Sep		00:03 -3.5E	03:38	06:50	4.0F	10:17
		12:53 -2.2E	16:19	18:58	2.3F	21:19
Tue 30 Sep		00:45 -3.4E	04:23	07:40	3.9F	11:13
		13:44 -1.9E	17:13	19:48	2.0F	22:02