

U.S.C.G. Merchant Marine Exam
Operator Uninspected Passenger Vessels
Q357 Navigation General – Great Lakes Inland
(Sample Examination)

Choose the best answer to the following Multiple-Choice Questions.

1. While on a course of 349°T , a light bears 13° on the starboard bow at a distance of 10.8 miles. What course should you steer to pass 2.5 miles abeam of the light leaving it to starboard?
- A. 352°T
 - B. 346°T
 - C. 349°T
 - D. 355°T

Correct answer: C

2. While on a course of 321°T , a light bears 7° on the starboard bow at a distance of 9.7 miles. What course should you steer to pass 3.5 miles abeam of the light leaving it to starboard?
- A. 307°T
 - B. 303°T
 - C. 297°T
 - D. 300°T

Correct answer: A

3. You are steaming on a course of 084°T at a speed of 13 knots. At 1919 a lighthouse bears 106.5°T . At 1957 the same lighthouse bears 129°T . What will be your distance off the lighthouse when abeam?
- A. 5.7 miles
 - B. 4.3 miles
 - C. 7.1 miles
 - D. 8.2 miles

Correct answer: A

4. Your vessel is on a course of 253°T at 18 knots.

At 2027 a light bears 275.5°T , and at 2055 the light bears 298°T .

At what time and distance off will your vessel be when abeam of the light?

- A. 2104, 7.7 miles
- B. 2115, 5.9 miles
- C. 2123, 7.3 miles
- D. 2109, 6.4 miles

Correct answer: B

5. You are steering 115°T , and a light is picked up dead ahead at a distance of 16.7 miles at 0522. You change course to pass the light 3.5 miles off abeam to port. If you are making 12 knots, what is your ETA at the position 3.5 miles off the light?
- A. 0647
 - B. 0644
 - C. 0650
 - D. 0653

Correct answer: B

6. You are steering 163°T , and a light is picked up dead ahead at a distance of 11 miles at 0142. You change course to pass the light 2 miles off abeam to starboard. If you are making 13 knots, what is your ETA at the position 2 miles off the light?
- A. 0226
 - B. 0229
 - C. 0235
 - D. 0232

Correct answer: D

7. Your vessel is steering course 216° per standard magnetic compass, variation for the area is 9°W , and deviation is 2°E . The wind is from the east, producing a 5° leeway. What true course are you making good?
- A. 204°T
 - B. 214°T
 - C. 223°T
 - D. 227°T

Correct answer: B

8. You are steering a magnetic compass course of 075° . The variation for the area is 10°W , and the compass deviation is 5°E . What is the true course you are steering?
- A. 090°T
 - B. 060°T
 - C. 070°T
 - D. 080°T

Correct answer: C

9. You are underway on course 215°T at 12 knots. The current is 000°T at 2.3 knots. What is the course made good?
- A. 209°T
 - B. 217°T
 - C. 222°T
 - D. 232°T

Correct answer: C

10. You wish to make good a course of 035°T while turning for an engine speed of 12 knots. The set is 340°T , and the drift is 2 knots. What course should you steer?
- A. 027°T
 - B. 037°T
 - C. 044°T
 - D. 054°T

Correct answer: C

11. Which is TRUE of echo-sounders?

- A. They measure the actual depth of water
- B. They measure the actual depth of water below keel
- C. They measure the average depth of water to soft bottom
- D. They measure the average depth from waterline to hard bottom

Correct answer: B

12. Which level of accuracy can be obtained utilizing the U.S. Coast Guard's Maritime Differential GPS in an established coverage area?

- A. 10 meters
- B. 20 meters
- C. 50 meters
- D. 92 meters

Correct answer: A

13. What does a white buoy with an orange circle marked on it indicate?

- A. Vessels are excluded from the area
- B. A mooring buoy
- C. Danger
- D. Operating restrictions are in effect

Correct answer: D

14. How are buoys which mark isolated dangers painted?

- A. Alternating red and white stripes
- B. Alternating green and white bands
- C. Alternating green and black bands
- D. Alternating red and black bands

Correct answer: D

15. In the U.S. Aids to Navigation System, lateral aids as seen entering from seaward will display lights with which characteristic?

- A. Flashing
- B. Quick Flashing
- C. Occulting
- D. All of the above

Correct answer: D

16. In United States waters, a buoy having red and white vertical stripes if lighted, it will have which light characteristic?

- A. Quick flashing
- B. Group occulting
- C. Morse (A)
- D. Interrupted quick flashing

Correct answer: C

17. Under the U.S. Aids to Navigation System, a special mark possesses which of the following characteristics?

- A. May show a yellow light with a flashing rhythm
- B. May show a light with the Morse code "A" rhythm
- C. Must be lighted with a fixed or flashing white light
- D. Must be lighted with a yellow isophase light

Correct answer: A

18. In illustration D045NG below, what two shapes shown are used to indicate a preferred channel?

- A. A and D
- B. C and D
- C. A and B
- D. B and C

Correct answer: A

19. You are sailing south on the Intracoastal Waterway (ICW) when you sight a red nun buoy with a yellow triangle painted on it. Which statement is TRUE?

- A. The ICW and another waterway coincide in this geographical area.
- B. Geometric symbols such as squares and triangles replace letters and numbers on ICW aids to navigation.
- C. The yellow triangle identifies a sharp turn (over 60°) in the channel.
- D. This is an information or regulatory buoy that also has lateral significance.

Correct answer: A

20. Which is TRUE of an occulting light?

- A. There is only a partial eclipse of the light
- B. The period of darkness exceeds the period of light
- C. The period of light exceeds the period of darkness
- D. The periods of light and darkness are equal

Correct answer: C

21. The luminous range of a light takes into account which factor?

- A. The glare from background lighting
- B. The existing visibility conditions
- C. The observer's height of eye
- D. The elevation of the light

Correct answer: B

22. The Light List shows that a navigational light has a nominal range of 15 miles and a height above water of 40 feet (12.2 meters). Your height of eye is 25 feet (7.6 meters) and the visibility is 5 miles. At about what range will you FIRST sight the light?

- A. 6.2 miles
- B. 9.5 miles
- C. 12.9 miles
- D. 14.2 miles

Correct answer: B

23. When is a revised print of a chart made?

- A. When there are numerous corrections to be made or the corrections are extensive
- B. Every two years to update the magnetic variation information
- C. After every major hydrographic survey of the area covered by the chart
- D. When a low-stock situation occurs and minor corrections are made

Correct answer: D

24. Which defines the term charted depth?

- A. The vertical distance from the chart sounding datum to the ocean bottom
- B. The average height of all low waters at a place
- C. The vertical distance from the chart sounding datum to the ocean bottom, plus the height of tide
- D. The average height of water over a specified period of time

Correct answer: A

25. Which describes the visible range marked on charts for lights?

- A. The minimum distance at which the light may be seen based on a 12 mile distance to visible horizon
- B. The maximum distance at which a light may be seen in clear weather with 10 miles visibility
- C. The minimum distance at which the light may be seen with infinite visibility
- D. The maximum distance the light may be seen restricted by the height of the light and the curvature of the earth

Correct answer: B

26. What publication has information on the climate, distances, navigation regulations, outstanding landmarks, channels and anchorages of Long Island Sound?

- A. Sailing Directions
- B. Pilot Chart
- C. Coast Pilot
- D. Light List

Correct answer: C

27. When a buoy is in position only during a certain period of the year, where may the dates when the buoy is in position be found?

- A. Coast Pilot
- B. On the chart
- C. Light List
- D. Notice to Mariners

Correct answer: C

28. Where can information for updating paper nautical charts primarily be found?

- A. Notice to Mariners
- B. Sailing Directions
- C. Nautical chart catalogs
- D. Coast Pilots

Correct answer: A

29. Which action should be taken prior to assuming the Deck Watch while the vessel is in port?

- A. Ensure that the vessel's moorings are adequate
- B. Ensure that all crew members are onboard
- C. Visually inspect and test operation of the blue mooring light
- D. Make a security call on VHF channel 16

Correct answer: A

30. Your vessel is proceeding up a channel, and you see a pair of range lights that are in line dead ahead. The chart indicates that the direction of this pair of lights is 343°T , and the variation is 5° west. If the heading of your vessel at the time of the sighting is 344° per standard magnetic compass, what is the correct deviation?

- A. 1°E
- B. 1°W
- C. 4°E
- D. 4°W

Correct answer: C

31. Your vessel is proceeding down a channel, and you see a pair of range lights that are in line dead ahead. The chart indicates that the direction of this pair of lights is 229°T , and variation is 6°W . If the heading of your vessel at the time of the sighting is 232° per standard magnetic compass, what is the deviation?

- A. 3°E
- B. 9°E
- C. 3°W
- D. 9°W

Correct answer: A

32. Which is TRUE concerning air masses near the earth's surface?

- A. They move from areas of high pressure to areas of low pressure
- B. They are not deflected by the earth's rotation
- C. Air masses are not affected by the earth's gravity
- D. In North America the air masses move from east to west

Correct answer: A

33. According to Buys Ballot's law, when an observer in the Northern Hemisphere experiences a northeast wind, where is the center of low pressure located?

- A. Northeast
- B. South-Southeast
- C. West-Southwest
- D. Northwest

Correct answer: B

34. A weather forecast states that the wind will commence backing. What does this indicate if you are in the Northern Hemisphere?

- A. The wind will shift in a clockwise manner
- B. The wind will shift in a counterclockwise manner
- C. The wind will continue blowing from the same direction
- D. The wind will decrease in velocity

Correct answer: B

35. Which type of cloud formation should be of immediate concern to small craft operators?

- A. Cirrus
- B. Altostratus
- C. Nimbostratus
- D. Cumulonimbus

Correct answer: D

36. Which are associated with Cumulonimbus clouds?

- A. Clear skies with the approach of a cold front
- B. A rapid drop in barometric pressure followed by darkness
- C. Dense fog and high humidity
- D. Gusty winds, thunder, rain or hail, and lightning

Correct answer: D

37. Which cloud is described as a low, dark, sheet-like cloud which is associated with continuous precipitation for many hours?

- A. Cumulus cloud
- B. Cirrus cloud
- C. Nimbostratus cloud
- D. Cumulonimbus cloud

Correct answer: C

38. Fog generally clears when the _____.

- A. temperature increases
- B. wind direction changes
- C. wind speed increases
- D. All of the above

Correct answer: D

39. What do the numbers on isobars indicate?

- A. Wind speed
- B. Rain in inches
- C. Temperature
- D. Barometric pressure

Correct answer: D

40. In a weather report, which defines the term "visibility"?

- A. The distance an observer can see a prominent object with a telescope or binoculars
- B. The ability to identify an object at night utilizing binoculars
- C. The distance in miles at which prominent objects are identifiable by the unaided eye
- D. The distance an observer can see with the unaided eye

Correct answer: C

41. Where can information about the direction and velocity of rotary tidal currents be found?

- A. Tidal Current Tables
- B. Mariner's Guide
- C. Nautical Almanac
- D. Tide Tables

Correct answer: A

42. How many high waters usually occur each day on the East Coast of the United States?

- A. One
- B. Two
- C. Three
- D. Four

Correct answer: B

43. Which defines the height of tide?

- A. The difference between the depth of the water and the high-water tidal level
- B. The difference between the depth of the water at high tide and the depth of the water at low tide
- C. The difference between the depth of the water and the area's tidal datum
- D. The depth of water at a specific time due to tidal effect

Correct answer: C

44. Which defines the range of tide?

- A. The difference between the heights of high and low tide
- B. The distance the tide moves out from the shore
- C. The duration of time between high and low tide
- D. The maximum depth of the water at high tide

Correct answer: A

45. Which term is used to define the point where the vertical rise or fall of tide has stopped?

- A. Slack water
- B. The reverse of the tide
- C. The rip tide
- D. The stand of the tide

Correct answer: D

46. On 9 November 2023 at 1130, you are inbound at Charleston Harbor Entrance Buoy "10" (ACT6611). Your vessel will transit 15nm and make good 10.0 knots to a berth where the nearest tidal current station is ACT6706. What will be the direction and velocity of the current as you approach the dock? See illustration D058NG.

- A. 0.5kts at 335°T
- B. 0.2kts at 104°T
- C. 0.5kts at 172°T
- D. 0.2kts at 280°T

Correct answer: A

47. On 15 October 2023, you will be docking on the Southern Branch Elizabeth River, VA at the first low tide. The berth is located between NOAA reference tidal station #8638660 and reference station #8639348. What time (LST) will you be docking? See illustration D063NG.

- A. 0325
- B. 0301
- C. 0401
- D. 0225

Correct answer: B

48. Which item in illustration D034NG below shows a fixed and flashing light?

- A. A
- B. B
- C. C
- D. D

Correct answer: A

49. Which defines a light's luminous range?

- A. The maximum distance at which a light may be seen under existing visibility conditions
- B. The maximum distance at which a light may be seen considering the height of the light and the height of the observer
- C. The average distance of visibility of the light
- D. The maximum distance at which a light may be seen in clear weather

Correct answer: A

50. The nominal range of a light may be accurately defined as the maximum distance at which a light may be seen _____.

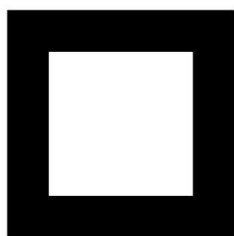
- A. with fifteen miles visibility
- B. with ten miles visibility
- C. under perfect visibility
- D. under existing visibility conditions

Correct answer: B

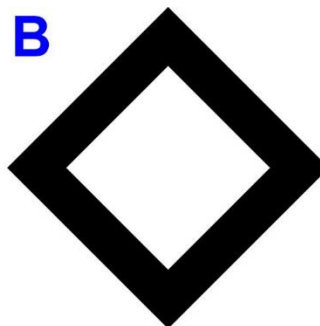
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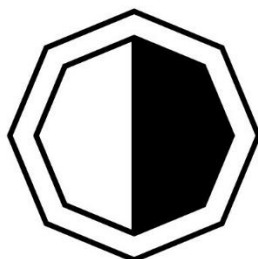
A



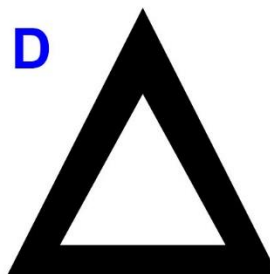
B



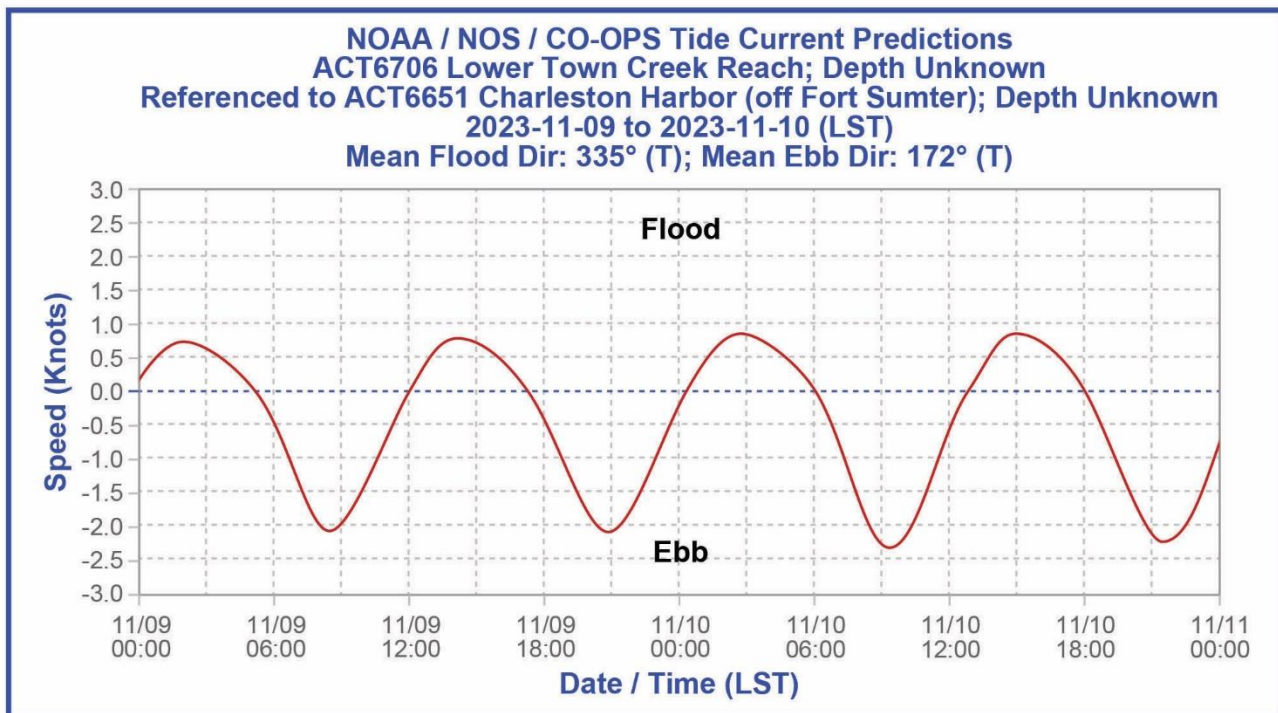
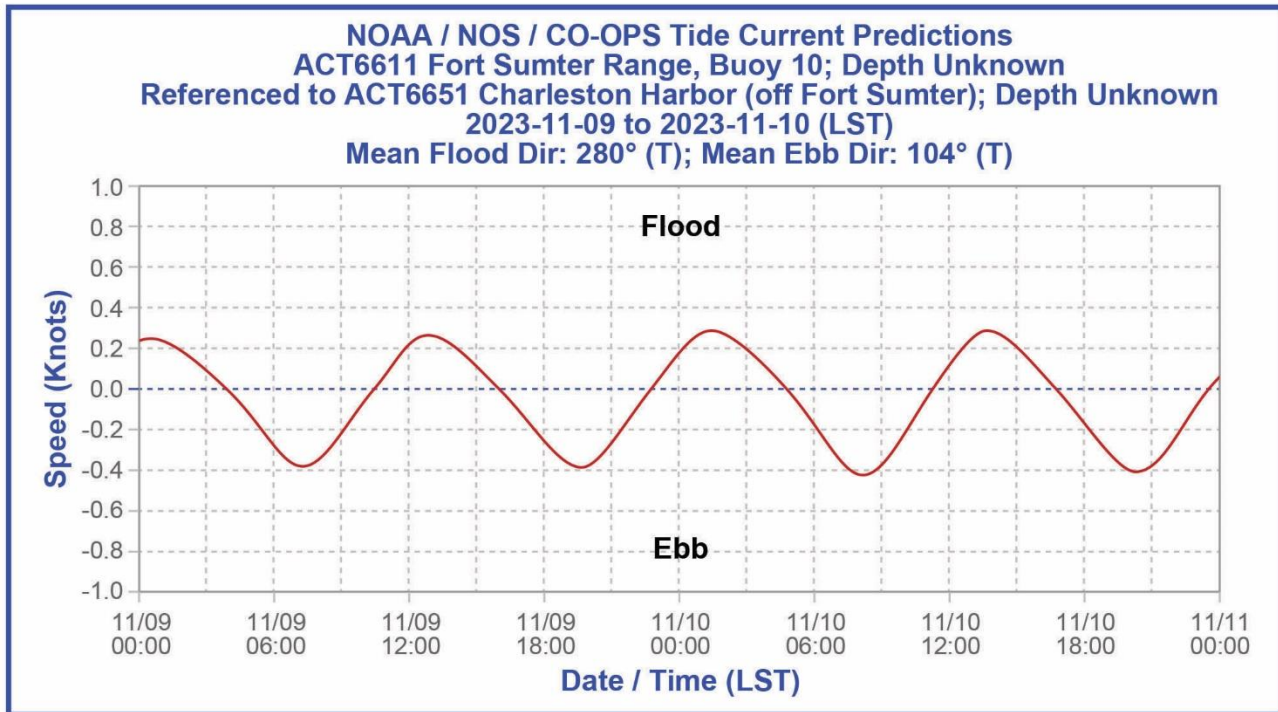
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D



D058NG



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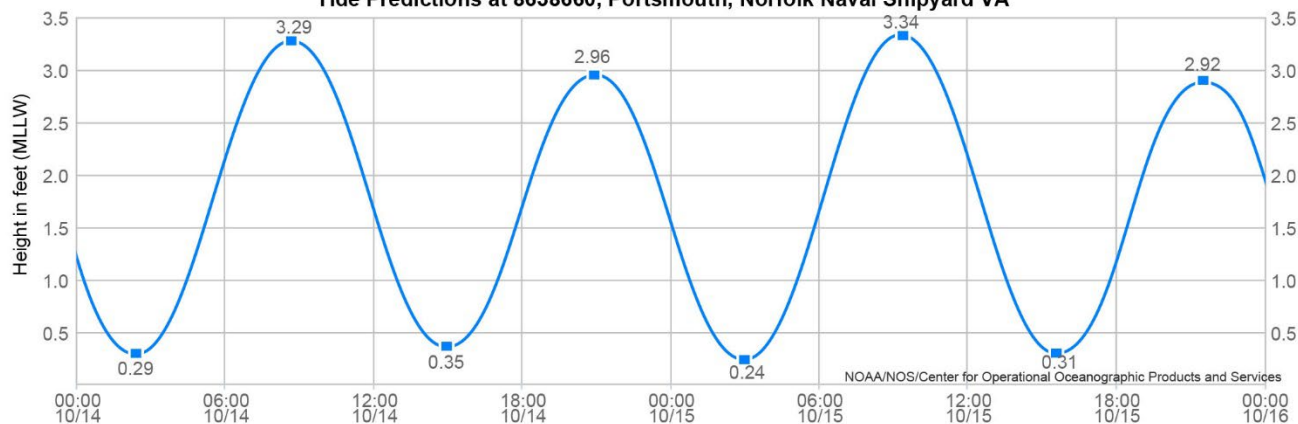
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D063NG

NOAA/NOS/CO-OPS

Tide Predictions at 8638660, Portsmouth, Norfolk Naval Shipyard VA



High/Low Tide Prediction Data Listing

Station Name: Portsmouth, Norfolk Naval Shipyard, VA

Action: Daily

Product: Tide Predictions

Start Date & Time: 2023/10/14 00:00

End Date & Time: 2023/10/15 23:59

Source: NOAA/NOS/CO-OPS

Prediction Type: Harmonic

Datum: MLLW

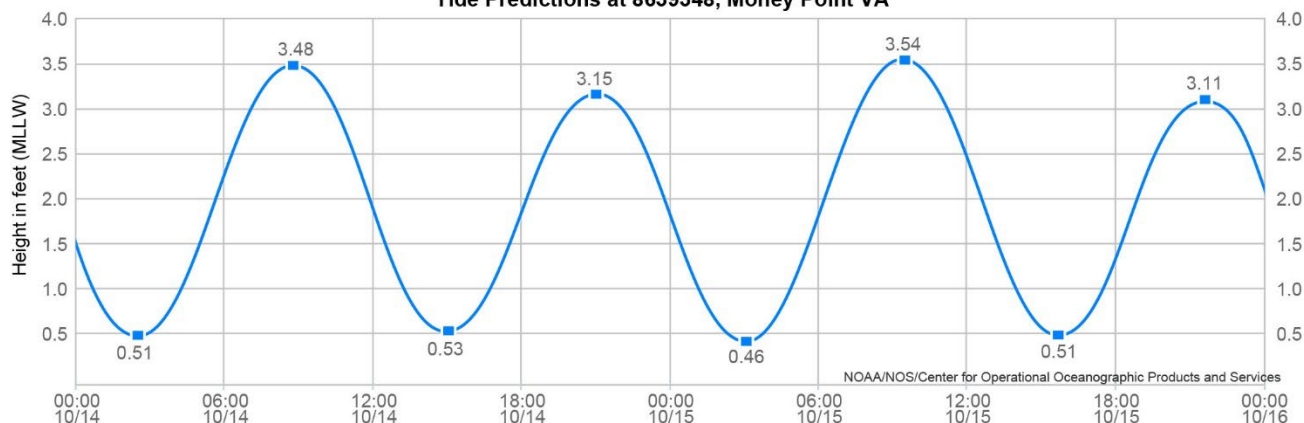
Height Units: Feet

Time Zone: LST

Date	Day	Time	Hgt	Time	Hgt	Time	Hgt	Time	Hgt
2023/10/14	Sat	02:25	0.29 L	08:40	3.29 H	14:58	0.35 L	20:53	2.96 H
2023/10/15	Sun	03:00	0.24 L	09:17	3.34 H	15:37	0.31 L	21:32	2.92 H

NOAA/NOS/CO-OPS

Tide Predictions at 8639348, Money Point VA



High/Low Tide Prediction Data Listing

Station Name: Money Point, VA

Action: Daily

Product: Tide Predictions

Start Date & Time: 2023/10/14 00:00

End Date & Time: 2023/10/15 23:59

Source: NOAA/NOS/CO-OPS

Prediction Type: Harmonic

Datum: MLLW

Height Units: Feet

Time Zone: LST

Date	Day	Time	Hgt	Time	Hgt	Time	Hgt	Time	Hgt
2023/10/14	Sat	02:25	0.51 L	08:48	3.48 H	15:00	0.53 L	21:02	3.15 H
2023/10/15	Sun	03:01	0.46 L	09:25	3.54 H	15:40	0.51 L	21:40	3.11 H

Note: The interval is High/Low, the solid blue line depicts a curve fit between the high and low values and approximates the segments between.
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.

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Tide Predictions,

<https://www.tidesandcurrents.noaa.gov>

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