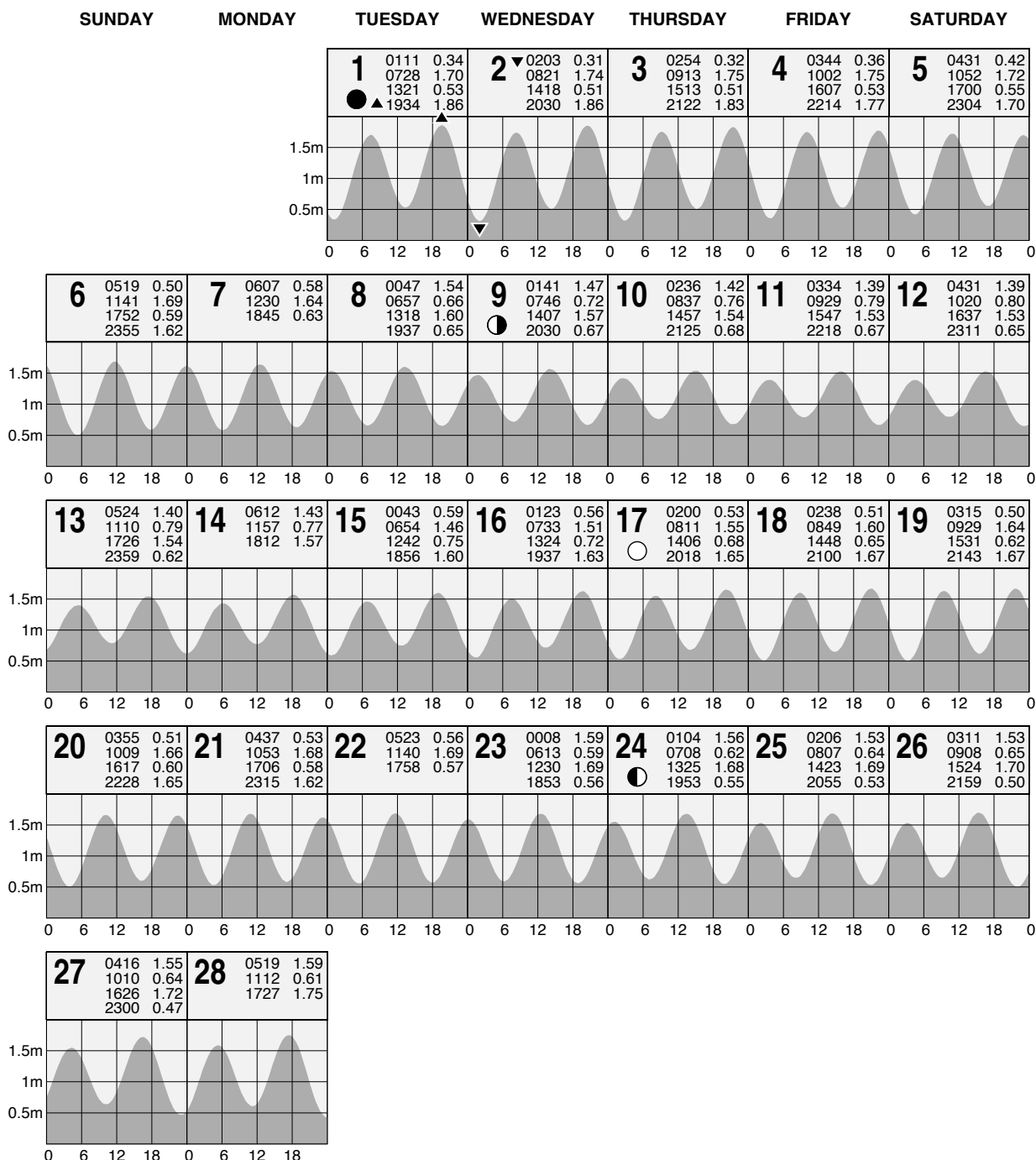


TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

FEBRUARY 2022 Local Standard Time



- ▲ Highest tide of the month
- ▼ Lowest tide of the month

- New moon
- ◐ First quarter
- Full moon
- ◑ Last quarter

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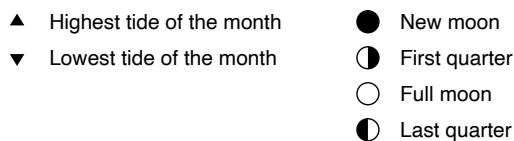
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No warranty is given in respect to errors, omissions, or suitability for any purpose.

Tide gauge zero is 2.932 metres below TONGBM

Local Standard Time

SATURDAY



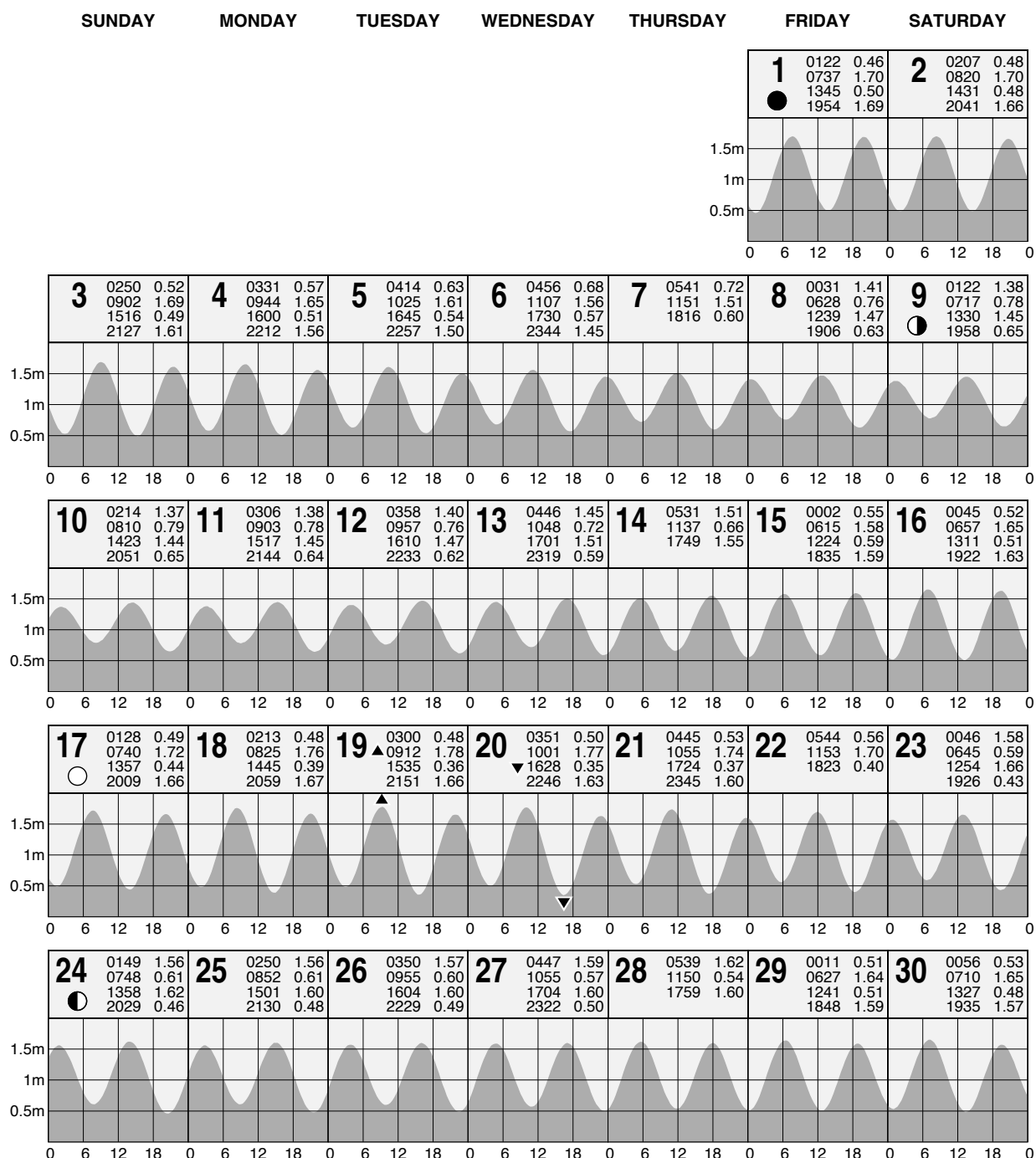
No warranty is given in respect to errors, omissions, or suitability for any purpose.

Tide gauge zero is 2.932 metres below TONGBM

TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

APRIL 2022

Local Standard Time



▲ Highest tide of the month

▼ Lowest tide of the month

● New moon

◐ First quarter

○ Full moon

◑ Last quarter

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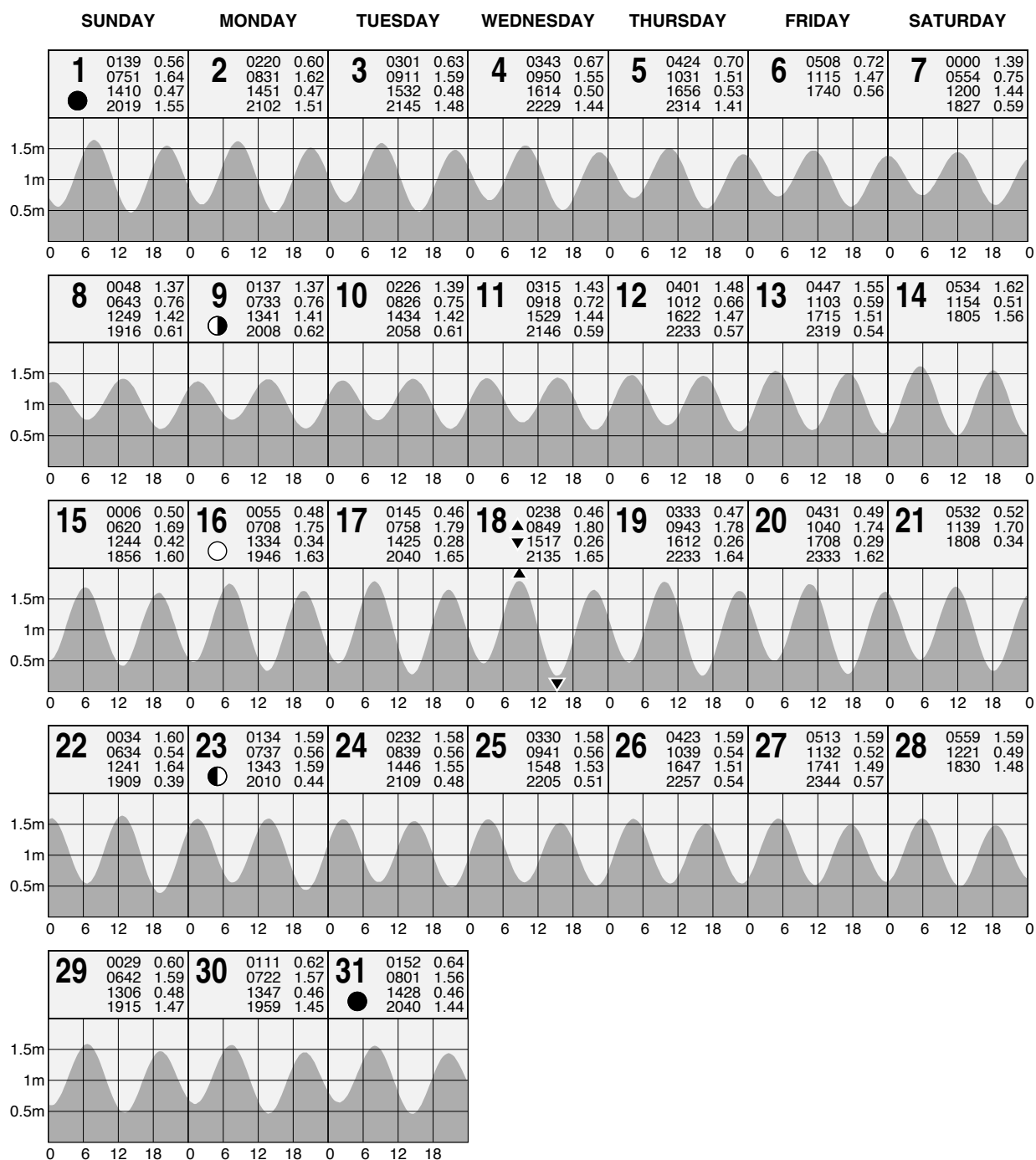
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Tide gauge zero is 2.932 metres below TONGBM

TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

MAY 2022

Local Standard Time



- ▲ Highest tide of the month
- ▼ Lowest tide of the month
- New moon
- ◐ First quarter
- Full moon
- ◑ Last quarter

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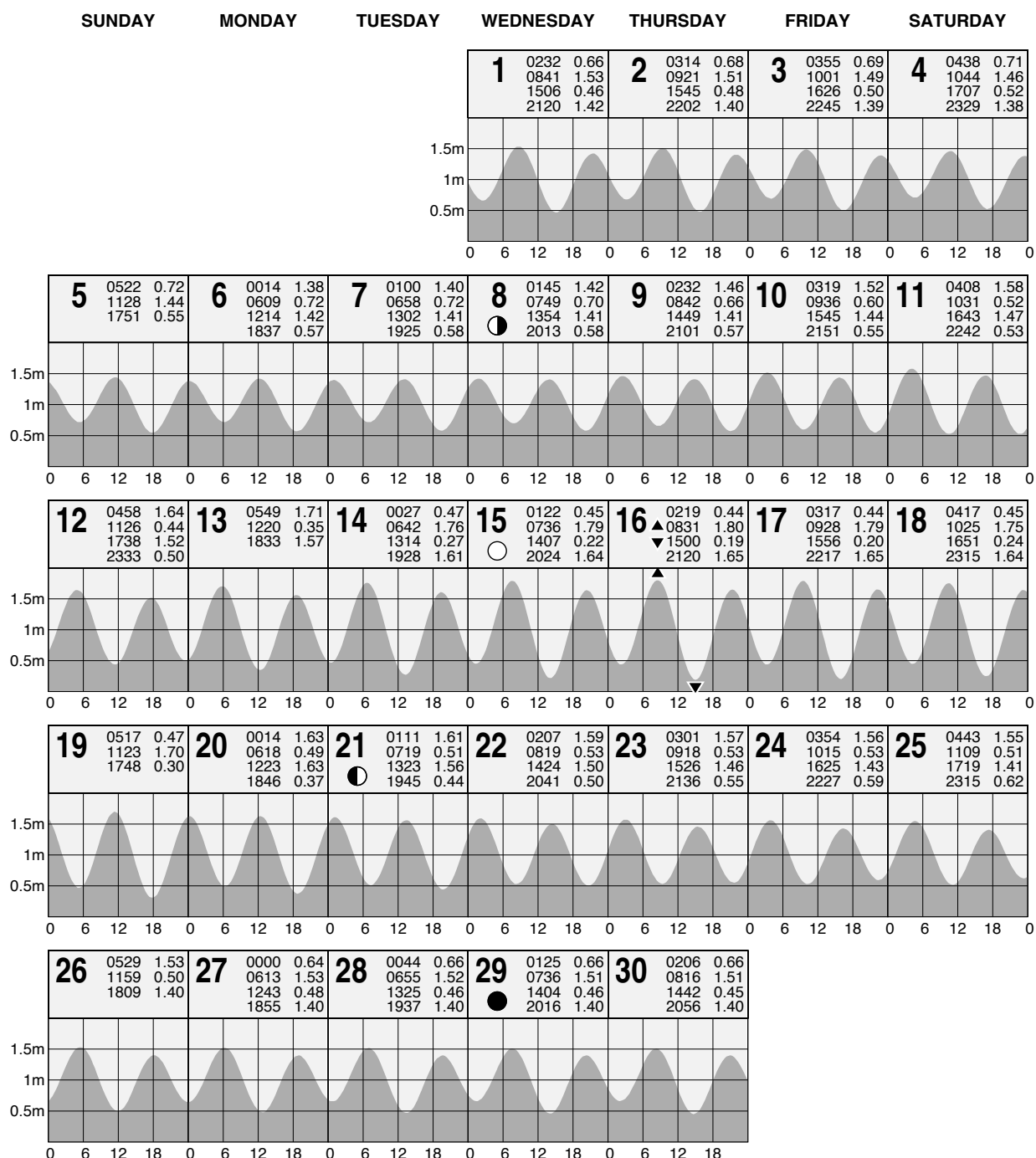
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TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

JUNE 2022

Local Standard Time



▲ Highest tide of the month

▼ Lowest tide of the month

● New moon

◐ First quarter

○ Full moon

◑ Last quarter

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Disclaimer: These tide predictions are supplied in good faith and are believed to be correct. They are not necessarily related to a local hydrographic chart datum.

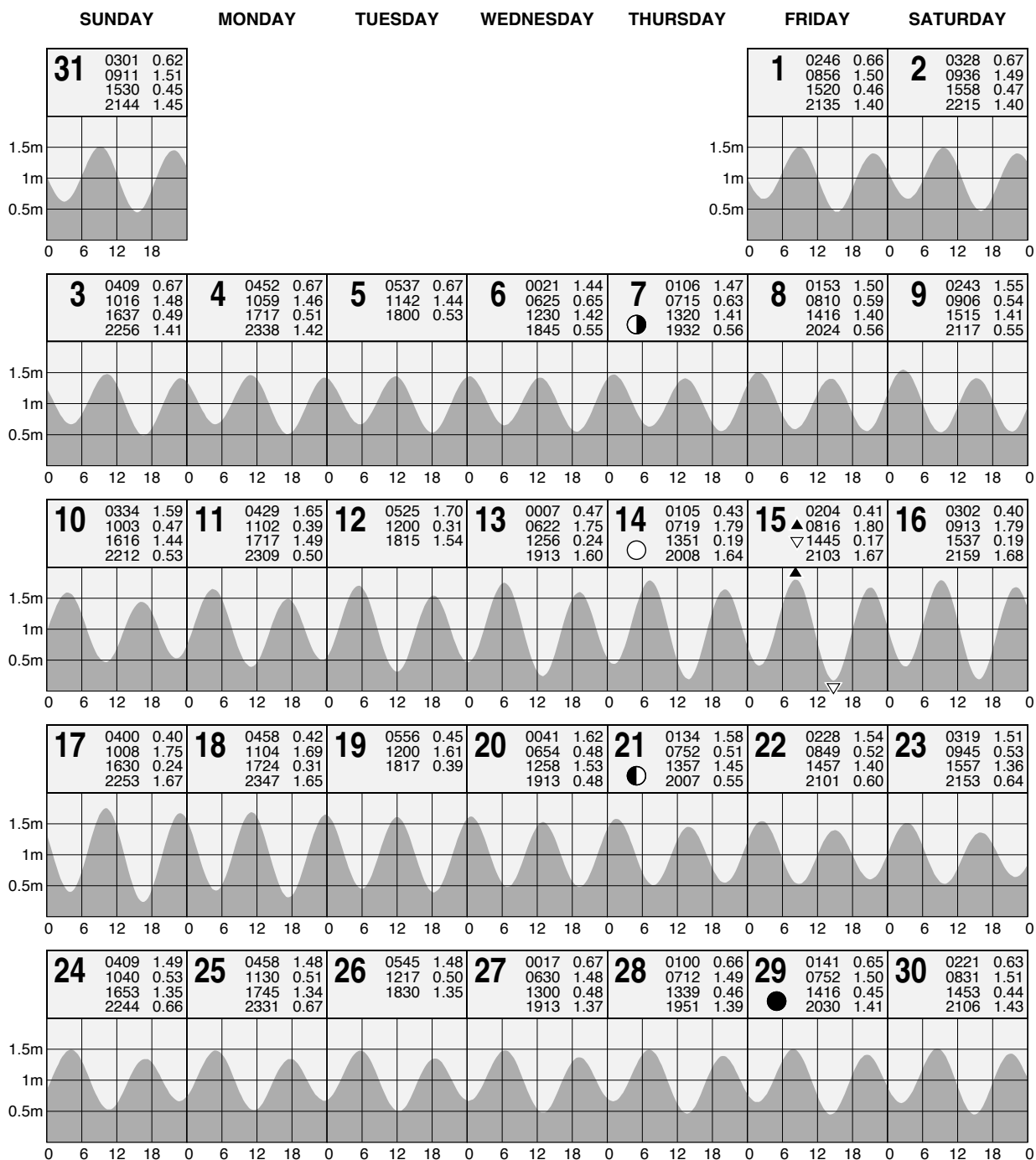
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Tide gauge zero is 2.932 metres below TONGBM

TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

JULY 2022

Local Standard Time



- ▲ Highest tide of the month
- ▼ Lowest tide of the month
- ▽ Lowest tide of the year
- New moon
- ◐ First quarter
- Full moon
- ◑ Last quarter

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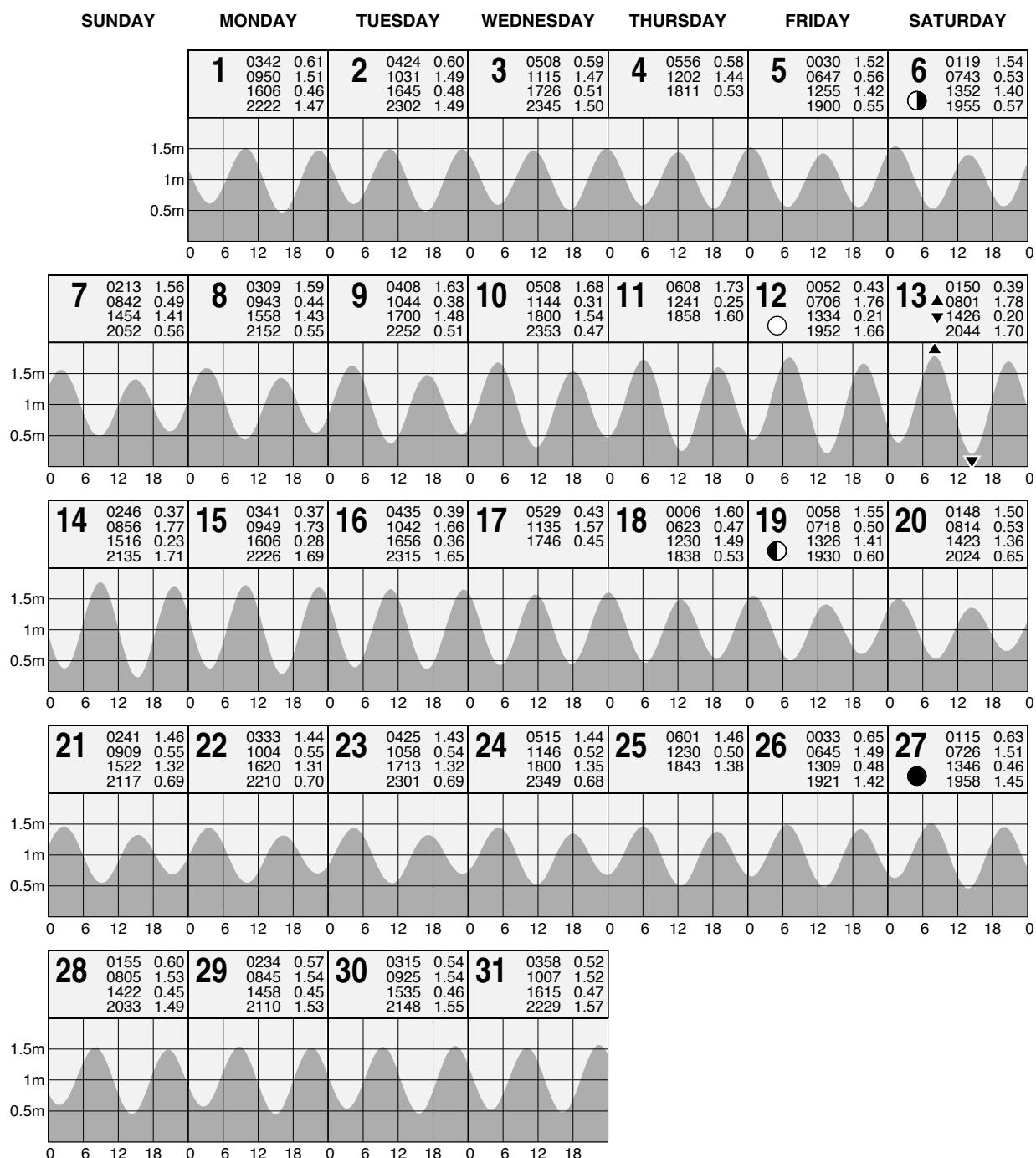
No warranty is given in respect to errors, omissions, or suitability for any purpose.

Tide gauge zero is 2.932 metres below TONGBM

TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

AUGUST 2022

Local Standard Time



▲ Highest tide of the month

▼ Lowest tide of the month

● New moon

◐ First quarter

○ Full moon

◑ Last quarter

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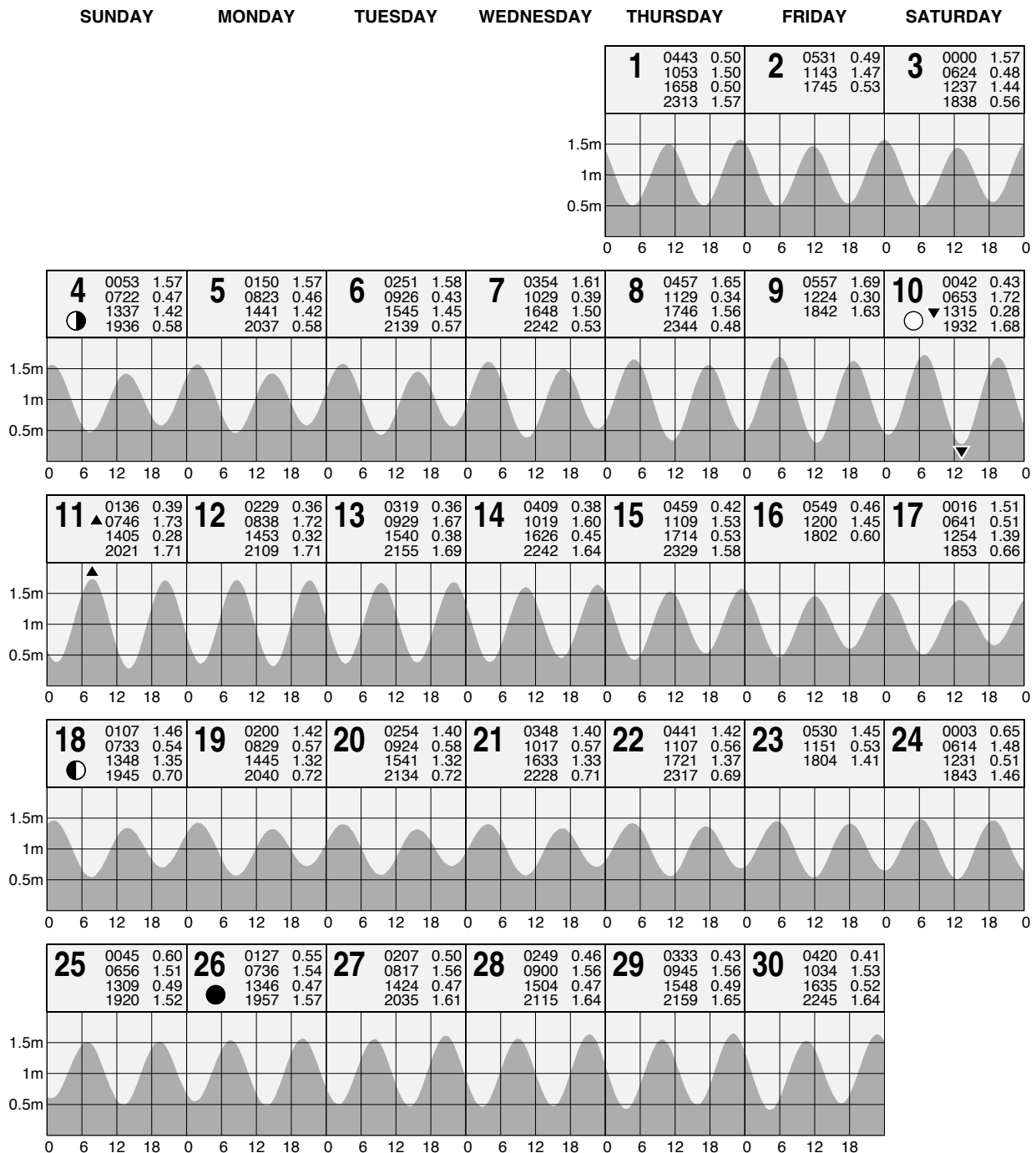
Disclaimer: These tide predictions are supplied in good faith and are believed to be correct. They are not necessarily related to a local hydrographic chart datum.

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TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

SEPTEMBER 2022 Local Standard Time



- ▲ Highest tide of the month
- ▼ Lowest tide of the month
- New moon
- ◐ First quarter
- Full moon
- ◑ Last quarter

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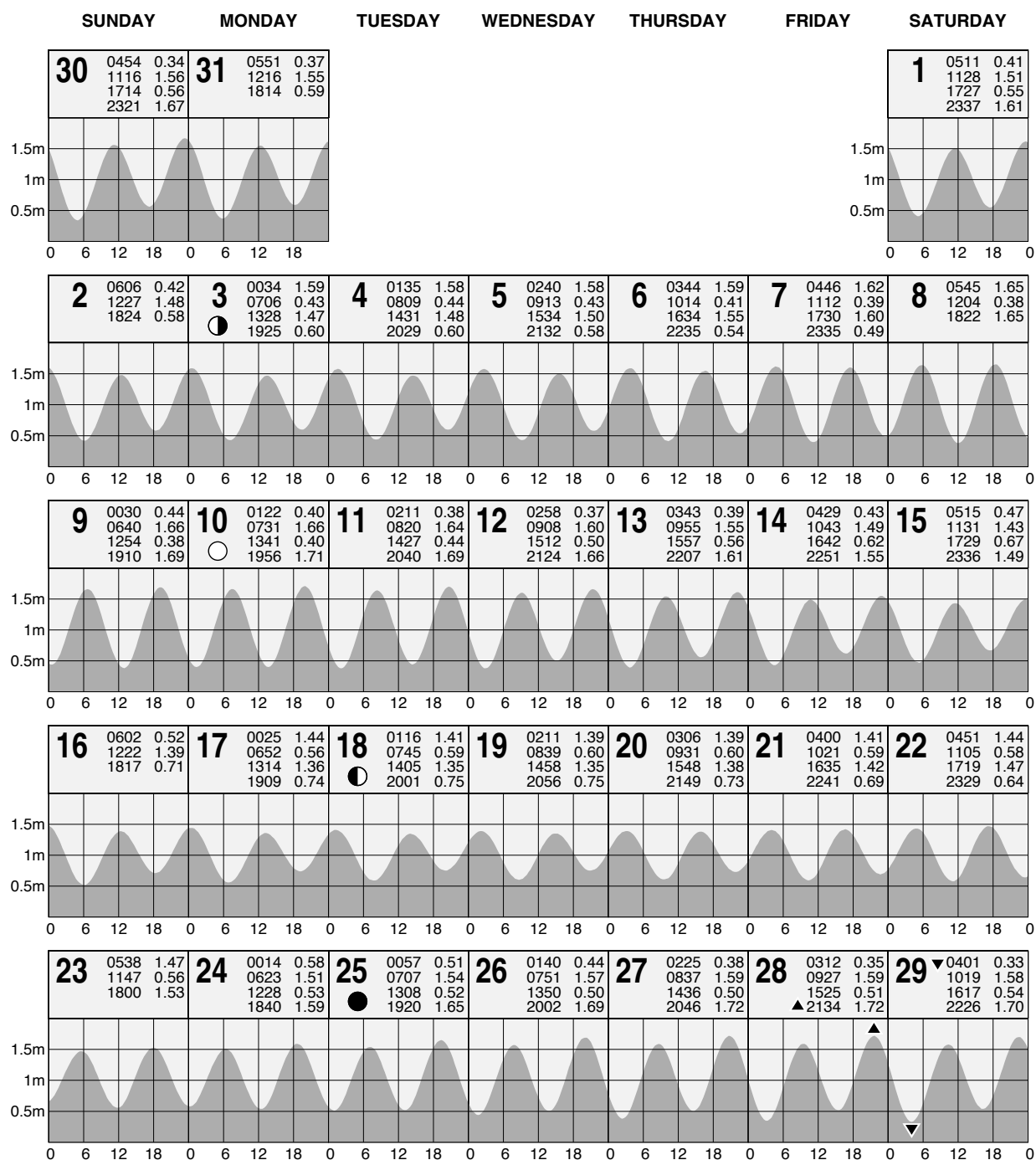
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Tide gauge zero is 2.932 metres below TONGBM

TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

OCTOBER 2022 Local Standard Time



- ▲ Highest tide of the month
- ▼ Lowest tide of the month
- New moon
- ◐ First quarter
- Full moon
- ◑ Last quarter

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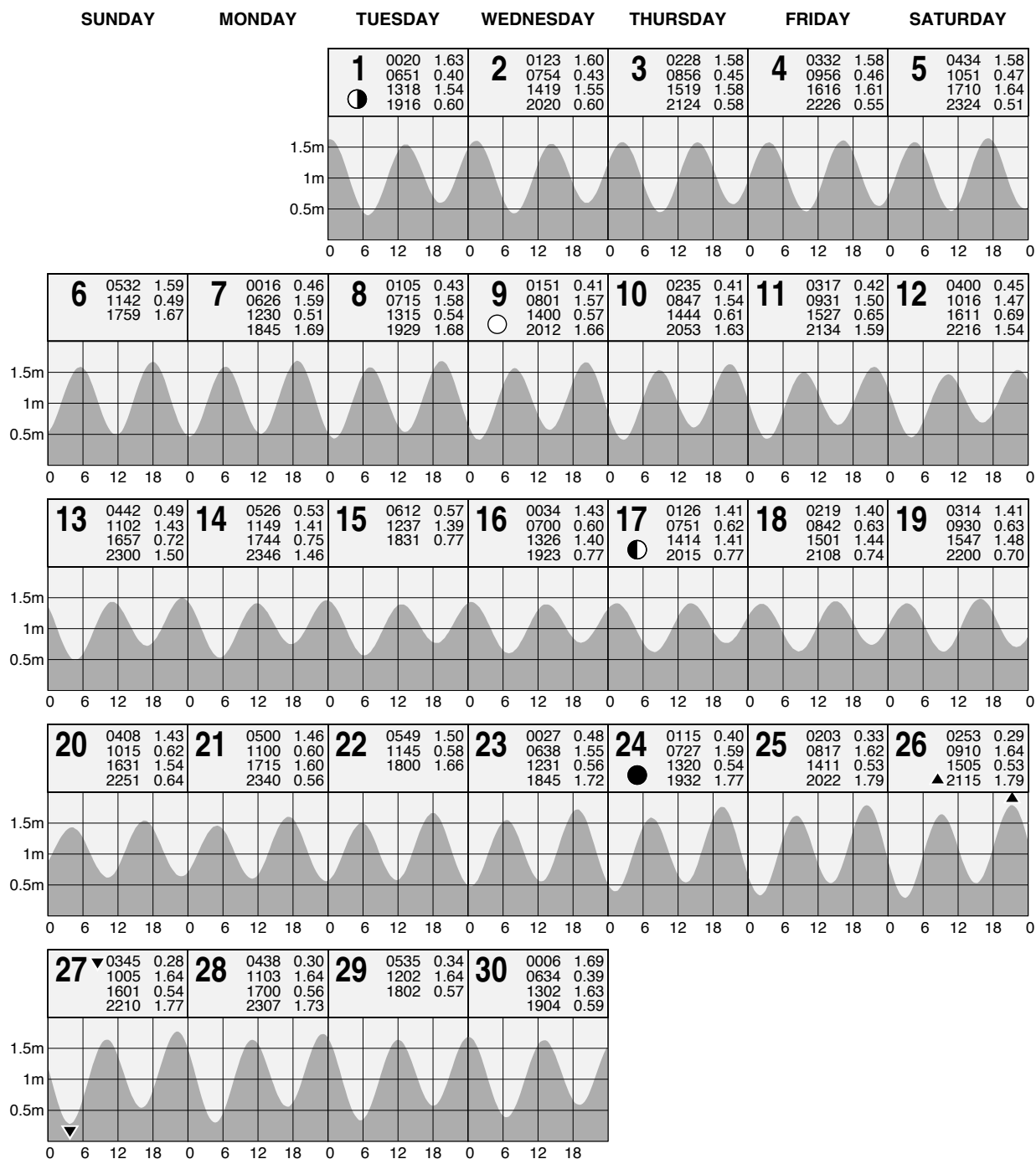
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TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

NOVEMBER 2022 Local Standard Time



- ▲ Highest tide of the month
- ▼ Lowest tide of the month
- New moon
- ◐ First quarter
- Full moon
- ◑ Last quarter

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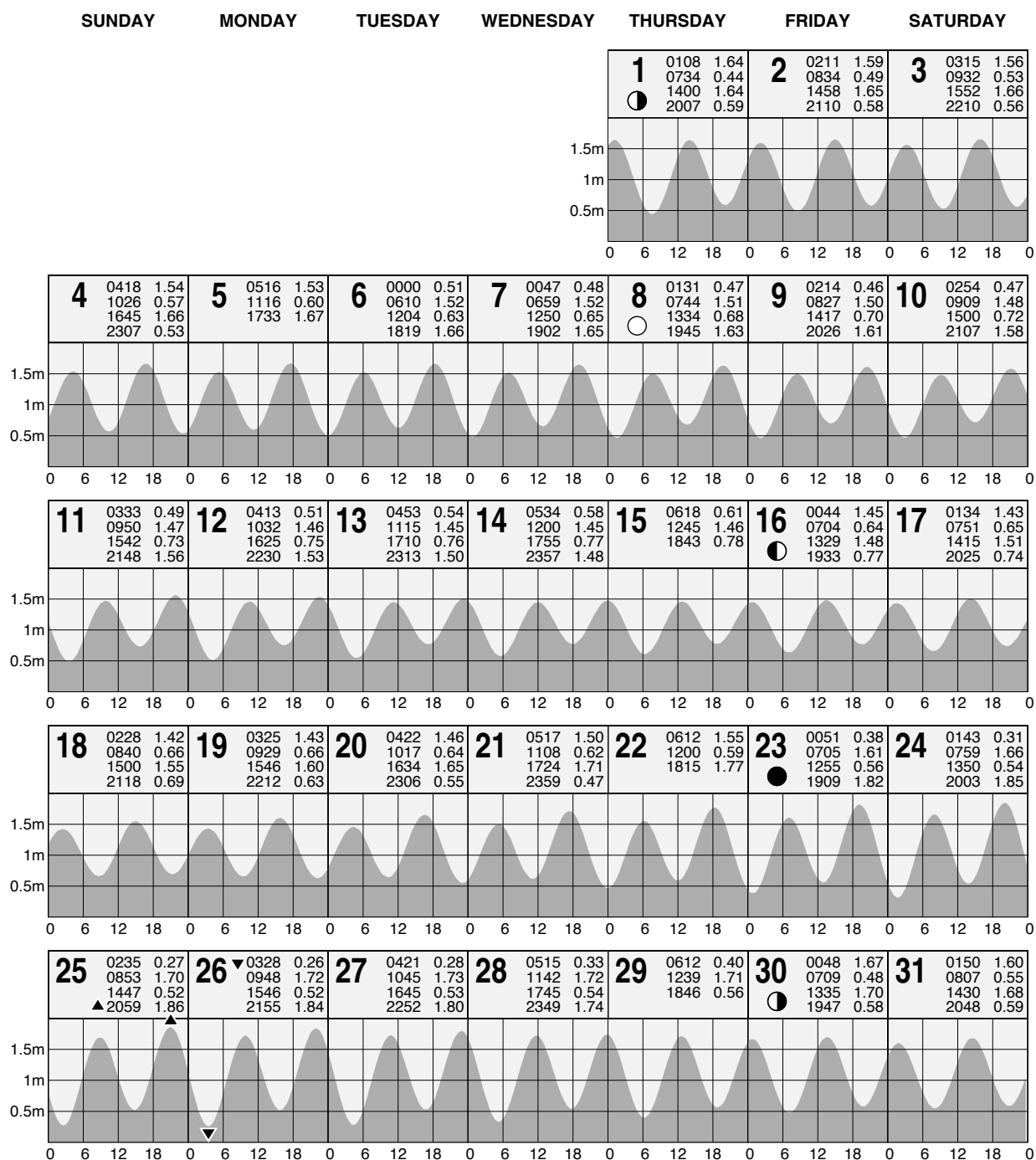
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TIDAL PREDICTIONS FOR TONGA - NUKU'ALOFA

DECEMBER 2022 Local Standard Time



▲ Highest tide of the month
 ▼ Lowest tide of the month

● New moon
 ◐ First quarter
 ○ Full moon
 ◑ Last quarter

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Traditional Knowledge and our Ocean

What is Traditional Knowledge?

Traditional knowledge is the knowledge held by those living off the land and ocean, be they indigenous or non-indigenous. This knowledge is not static and can evolve over time and is often imbedded in practice and belief.

By closely observing their local environment, communities in the Pacific have developed skills that enable them to build coping strategies for variable weather and climate conditions, including tides.



Figure 1. Banded Sea Krait, *Laticauda colubrina* Mengerenger [Traditional Knowledge from Palau]

example was granted by the Bureau of the Cultural and Historical Preservation Office.

The Banded Sea Krait (Mengerenger) is a predictor of seawater events. If we were out at sea and a Mengerenger swims toward the canoe or boat, skimming the water surface, it means a big catch of fish. If it is seen skimming the surface of the water but heading towards the village, a strong windstorm is forecasted. (Creatures of Prophecy and What they Foretell by the Bureau of Cultural and Historical Preservation and the Palau Society of Historians. [English. 2021]) Permission to use the Banded Sea Krait

Using tidal information

Having an understanding of local tidal fluctuations is an important component of knowing when to travel and where and when to gather food from the oceans. Being familiar with the natural rhythm of the tides can also help to identify signs that may precede a tsunami, including an unusually low and receding waterline.



Figure 2 and 3 Villagers fishing in the tidal pools in Vanuatu. Photo: Vanuatu Meteorology and Geohazards Department- VAN-KIRAP

Tidal variations impact on the life cycles of animals that inhabit the coastal zone and influence their patterns of activities and behaviour. This, in turn, influences the fishing strategies of coastal communities. Based on accumulated knowledge, some fishermen construct calendars and mental maps in order to predict fish locations based on the phases of the moon.

Seasonal Calendars

In some communities, annual tidal cycles (determining reef accessibility) combined with seasonal resource abundance give rise to local customs prescribing when the season for communal harvest of fish will be. The exact dates of the harvest period are determined by community specialists who understand the movement of fish in relation to lunar phases and optimal tidal conditions.

Indicators	Actions	Outcomes	Indicators	Actions	Outcomes
Coral Reefs and sea weed Photo: VMGD-VAN-KIRAP	Smell and odour can be smelled from inland or far distance from the sea to the village indicates low tide	Low Tide 	Sea birds Photo: Google	Flock of sea birds flying above the sea and making noise, it indicate low tide	Low Tide
Sea Mud Photo: VMGD-VAN-KIRAP	Smell and odour can be smell in from far distance from the sea to the village and inlands, indicates low tide	Low Tide 	Dry land animals Dogs, chicken, cows. Photo: Google	Absence of domesticated animals in the village and making agitating noise at the sea shore, it indicate low tide	Low Tide
Sea Waves Photo: VMGD-VAN-KIRAP	Sea waves hitting and crashing the sea shore with a very loud noise that can be heard from distance, it indicate low tide	Low Tide 	Moon phase Photo: Google	Presence of the first and the last quarter of the moon phase it indicate the lowest low tide	Low Tide

Table 1. Seasonal calendar and examples from Vanuatu collected by VMGD VAN-KIRAP

For example, in many islands of Vanuatu when the constellation Pleiades appears on the western horizon after sunset the new Yam season begins and seasonal low tides are expected. In the Solomon Islands, traditional lunar calendars are used to predict when and where target fish will occur. In Samoa two sayings are used to predict the tides: When the eyes of the cat are shaped like a quarter of a moon the tide is low; when the cats eyes are round the tide is high.

For further information on the use of traditional knowledge in the Pacific, please contact:
 Secretariat of the Pacific Regional Environment Programme Website: <http://www.sprep.org>
 Pacific Meteorological Desk Partnership <https://www.pacificmet.net/>
 Email: PacMetDesk@sprep.org





Further Information:

Pacific Sea Level and Geodetic Monitoring (PSLGM) project as part of
Climate and Oceans Support Program in the Pacific (COSPPac)

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