

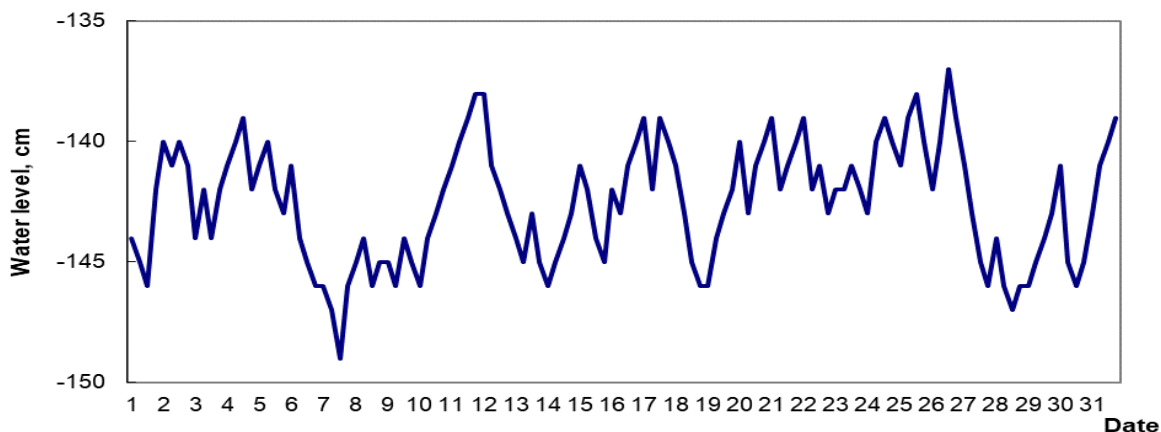


MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»

RESEARCH CENTER

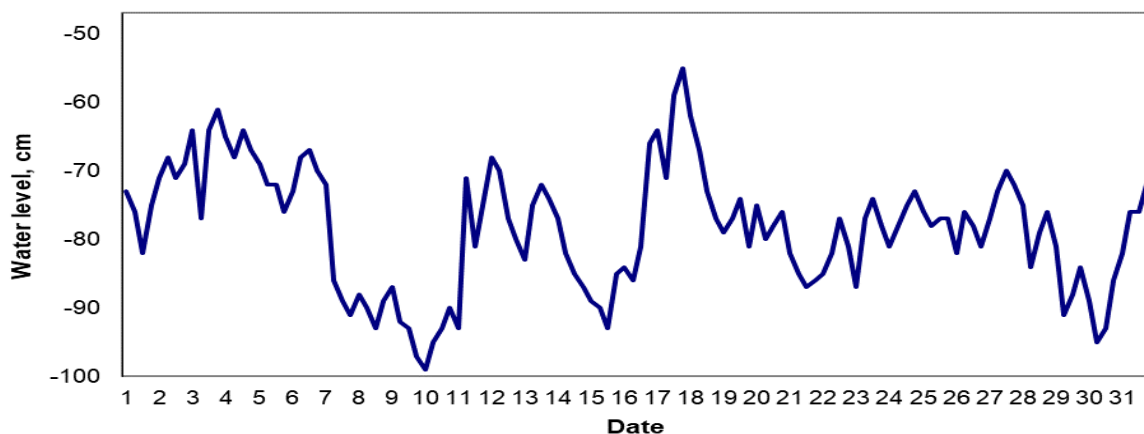
OVERVIEW OF UP SURGE AND DOWN SURGE EVENTS
in July 2026

Kulaly



The runup and surge level fluctuations did not exceed 12 cm. The sea level change during the month varied from minus 29.49 m BS to minus 29.37 m BS.

Peshnoy



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
03.07.2026	16		SW	6
06-07.07.2026		24	N, NW	16
11.07.2026	22		SSW	8
12-13.07.2026		15	NW	8
14-15.07.2026		16	NW	8
16-17.07.2026	22		SSW	6
17-19.07.2026		24	WNW	6
28-29.07.2026		15	N, NW	2
30-31.07.2026	19		WSW	10

- On July 3, a sea level rise of 16 cm was observed, from minus 28.77 m BS to minus 28.61 m BS. Wind speed reached 6 m/s, predominantly from the south-west;

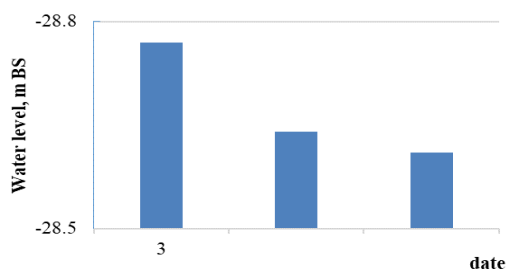


Figure 1. Graph of sea level changes in Peshnoy on July 03, 2026.

- On July 06–07, a sea level drop of 24 cm was observed, from minus 28.67 m BS to minus 28.91 m BS. Wind speed reached 16 m/s, predominantly from the north and north-west;

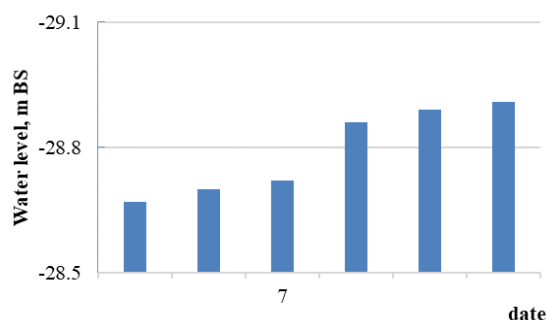


Figure 2. Graph of sea level changes in Peshnoy on July 06-07, 2026.

- On July 11, a sea level rise of 22 cm was observed, from minus 28.93 m BS to minus 28.71 m BS. Wind speed reached 8 m/s, predominantly from the south-south-west;

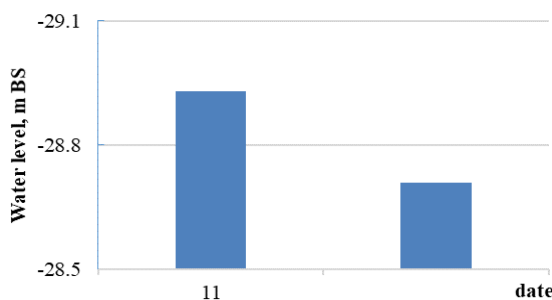


Figure 3. Graph of sea level changes in Peshnoy on July 11, 2026.

- On July 12–13, a sea level drop of 15 cm was observed, from minus 28.68 m BS to minus 28.83 m BS. Wind speed reached 8 m/s, predominantly from the north-west;

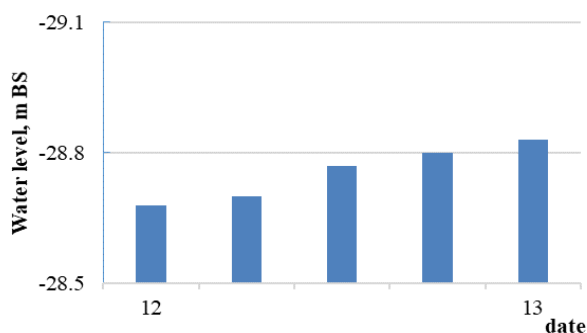


Figure 4. Graph of sea level changes in Peshnoy on July 12-13, 2026.

- On July 14–15, a sea level drop of 16 cm was observed, from minus 28.77 m BS to minus 28.93 m BS. Wind speed reached 8 m/s, predominantly from the north-west;

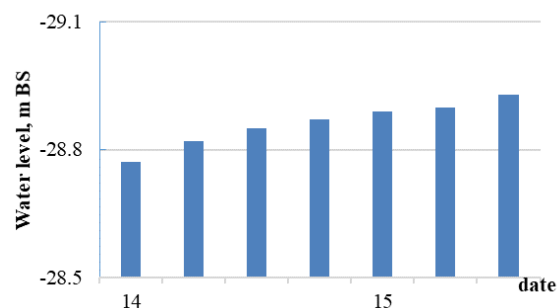


Figure 5. Graph of sea level changes in Peshnoy on July 14-15, 2026.

- On July 16–17, a sea level rise of 22 cm was observed, from minus 28.86 m BS to minus 28.64 m BS. Wind speed reached 6 m/s, predominantly from the south-south-west;

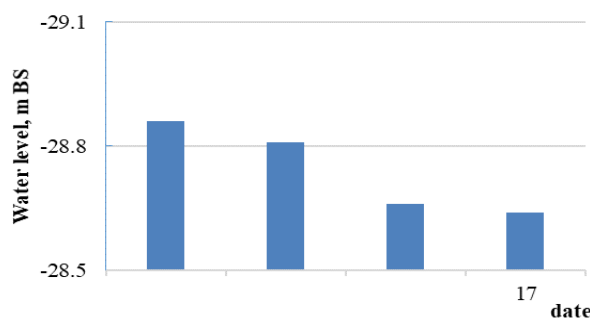


Figure 6. Graph of sea level changes in Peshnoy on July 16-17, 2026.

- On July 17–19, a sea level drop of 24 cm was observed, from minus 28.55 m BS to minus 28.79 m BS. Wind speed reached 6 m/s, predominantly from the west-north-west;

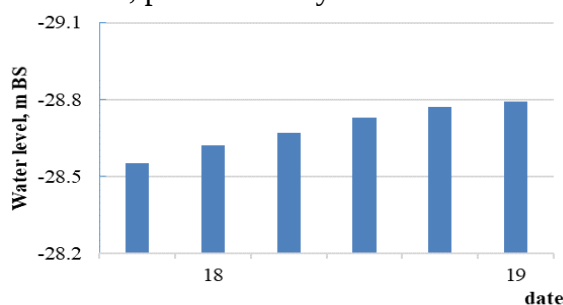


Figure 7. Graph of sea level changes in Peshnoy on July 17-19, 2026.

- On July 28–29, a sea level drop of 15 cm was observed, from minus 28.79 m BS to minus 28.91 m BS. Wind speed reached 2 m/s, predominantly from the north and north-west;

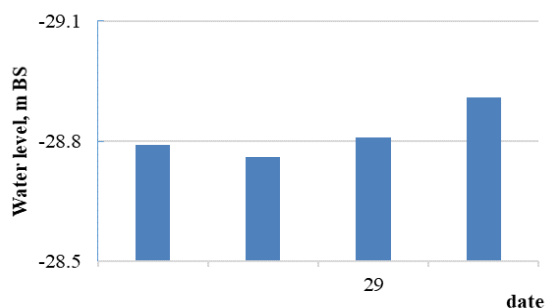


Figure 8. Graph of sea level changes in Peshnoy on July 28-29, 2026.

- On July 30–31, a sea level rise of 19 cm was observed, from minus 28.95 m BS to minus 28.76 m BS. Wind speed reached 10 m/s, predominantly from the west-south-west;

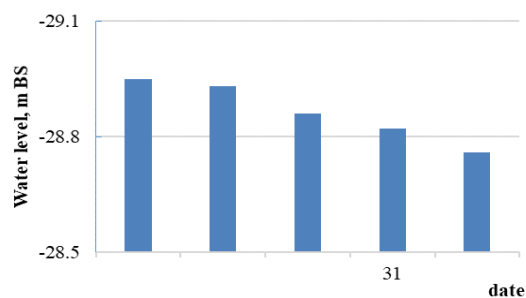
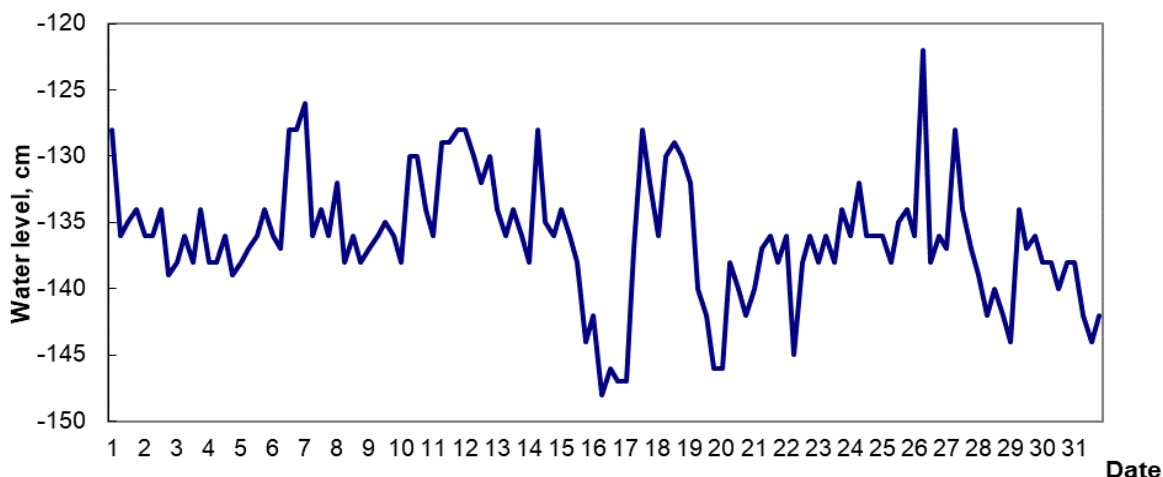


Figure 9. Graph of sea level changes in Peshnoy on July 30-31, 2026.

Fort-Shevchenko



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
17.07.2026	19		W	3
18-19.07.2026		17	N	6
26.07.2026		16	SE, SW	9

- On July 17, a sea level rise of 19 cm was observed, from minus 29.47 m BS to minus 29.28 m BS. Wind speed reached 3 m/s, predominantly from the west;

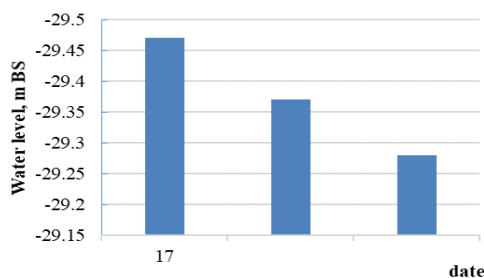


Figure 10. Graph of sea level changes in Fort-Shevchenko on July 17, 2026.

- On July 18–19, a sea level drop of 17 cm was observed, from minus 29.29 m BS to minus 29.46 m BS. Wind speed reached 6 m/s, predominantly from the north;

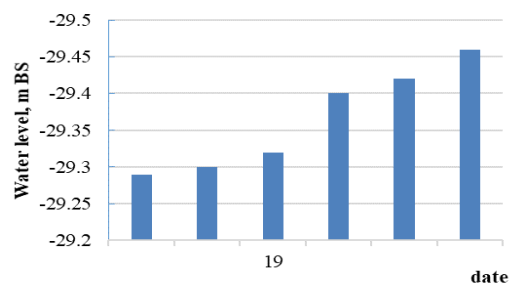


Figure 11. Graph of sea level changes in Fort-Shevchenko on July 18-19, 2026.

- On July 26, a sea level drop of 16 cm was observed, from minus 29.22 m BS to minus 29.38 m BS. Wind speed reached 9 m/s, predominantly from the south-east and south-west;

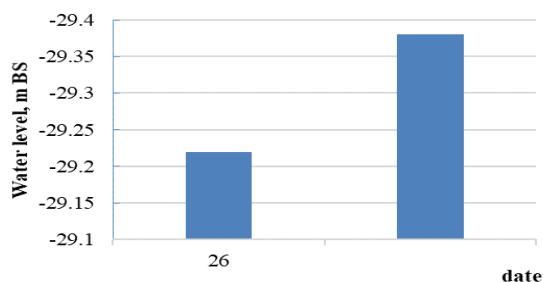
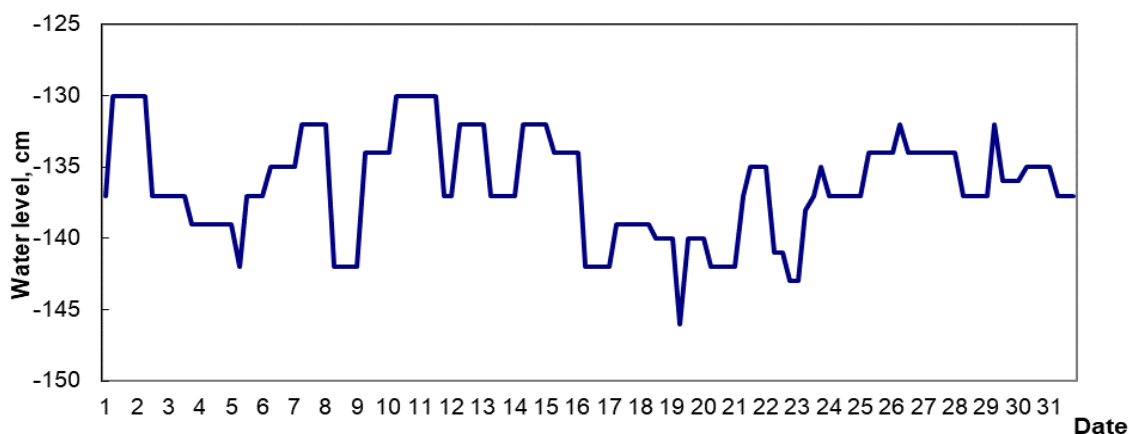


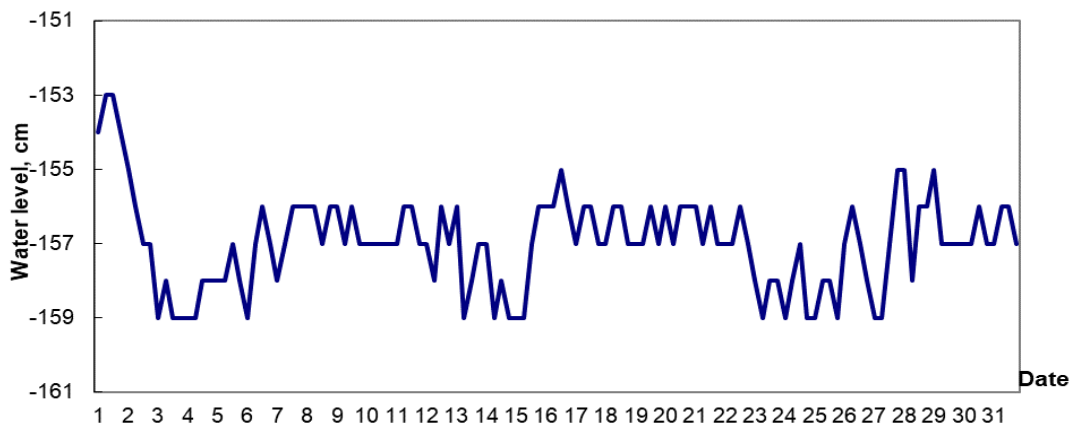
Figure 12. Graph of sea level changes in Fort-Shevchenko on July 26, 2026.

Saura



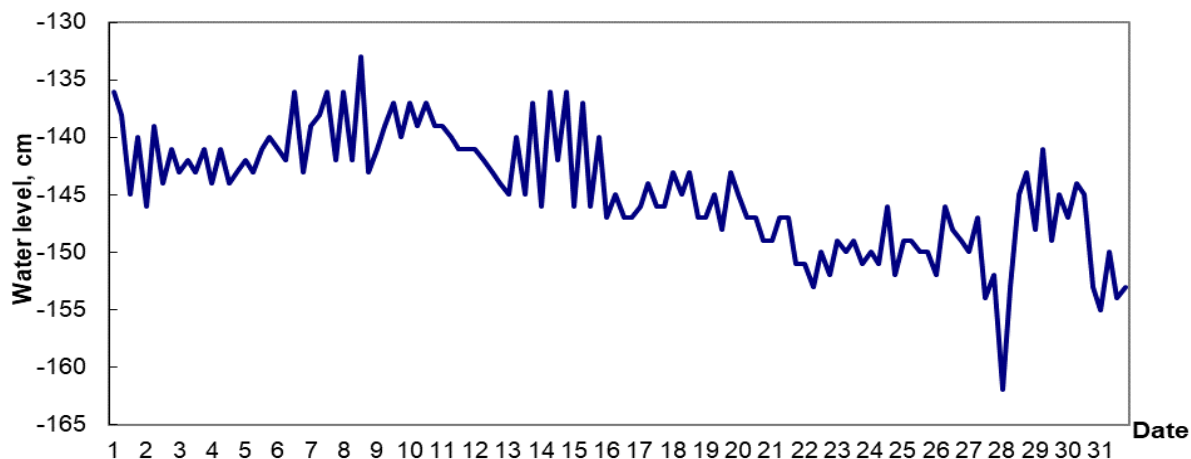
The runup and surge phenomena were not recorded. The sea level change during the month varied from minus 29.46 m BS to minus 29.30 m BS.

Peschany



The runup and surge level fluctuations did not exceed 6 cm. The sea level change during the month varied from minus 29.59 m BS to minus 29.53 m BS.

Aktau



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
28.07.2026	19		W	3

- On July 28, a sea level rise of 19 cm was observed, from minus 29.62 m BS to minus 29.43 m BS. Wind speed reached 3 m/s, predominantly from the west;

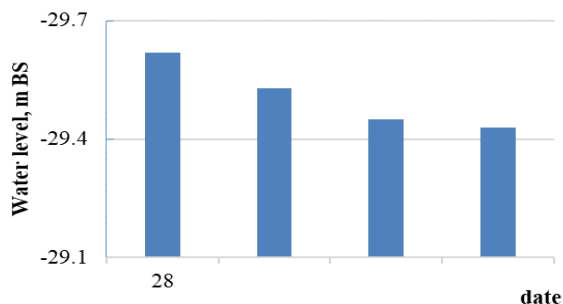
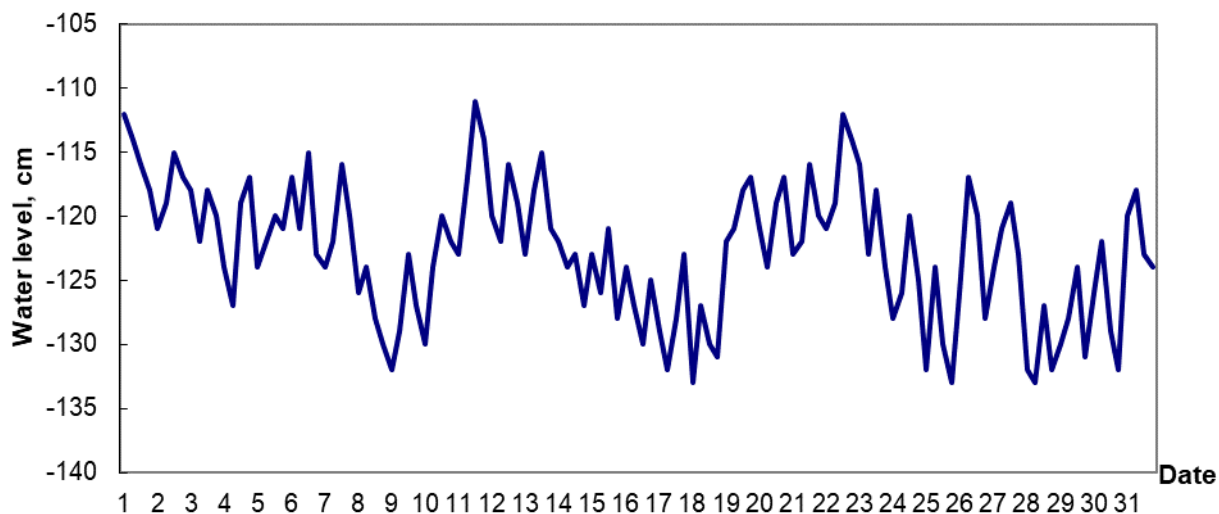


Figure 13. Graph of sea level changes in Aktau on July 28, 2026.

Fetisovo



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
25-26.07.2026	16		E	8

- On July 25–26, a sea level rise of 16 cm was observed, from minus 29.33 m BS to minus 29.17 m BS. Wind speed reached 8 m/s, predominantly from the east;

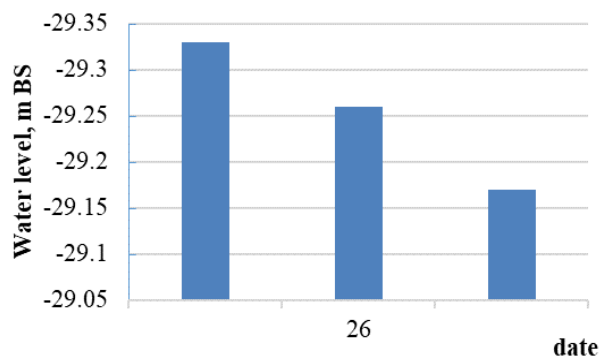


Figure 14. Graph of sea level changes in Fetisovo on July 25-26, 2026

Note:

Analysis of the Zhanbay upsurge and downsurge events was not performed due to the receipt of hydrometeorological data with gaps.

STORM SURGE HAZARD CRITERIA FOR THE NORTHEASTERN COASTLINE

	Rise/Fall, cm**	Characteristic***	Consequences
up surge	49	Critical	flooded coast area to 5 km
	60	Danger	flooding and flooding of dams and buildings up to 10 km
	109	Especially danger	flooding of the coast for more than 10 km, destruction of dams and buildings
down surge	-46	Critical	worsening navigation conditions for small ships
	-60	Danger	worsening of navigation conditions for small and medium-sized ships
	-104	Especially danger	ships would be aground

Note:

The calculated characteristics were obtained using the hydrodynamic module of the MIKE 21 Flow Model, adapted in RSE "Kazhydromet" to the conditions of the Caspian Sea.

***At definition of characteristic marks local conditions were considered.*

****Critical – 50 % frequency, danger – 25 % frequency, especially danger– 2 % frequency. The calculation was carried out for the period 1940-2024 according to the data of Peshnoy station.*

BS – Baltic System

The bulletin was compiled by the Department of Hydrometeorological Research of the Caspian Sea

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When using materials of the bulletin the link to RSE "Kazhydromet" is obligatory
