



## Hydrological Information 2026

### Hydrological Year 2025

(01.11.2024 - 31.10.2025)

| Primary Values | Year 2025               | 5-year period 2016 - 2020                                                          | 5-year period 2021 - 2025 |
|----------------|-------------------------|------------------------------------------------------------------------------------|---------------------------|
| HHW            | NHN + 4,04 m (20.12.24) | NHN + 5,48 m (29.10.17)                                                            | NHN + 5,87 m (19.02.22)   |
| LHW            | NHN + 0,58 m (11.02.25) | NHN - 0,07 m (03.01.16)                                                            | NHN - 0,44 m (20.10.23)   |
| HLW            | NHN + 0,39 m (05.10.25) | NHN + 1,39 m (26.12.16)                                                            | NHN + 1,68 m (17.02.22)   |
| LLW            | NHN - 3,07 m (11.02.25) | NHN - 3,64 m (18.03.18)                                                            | NHN - 3,50 m (20.10.23)   |
| MHW            | NHN + 2,15 m            | NHN + 2,15 m                                                                       | <b>NHN + 2,19 m *)</b>    |
| MLW            | NHN - 1,62 m            | NHN - 1,66 m                                                                       | <b>NHN - 1,64 m *)</b>    |
| MTR            | 3,77 m                  | 3,81 m                                                                             | <b>3,83 m</b>             |
| MHW            | NHN + 2,14 m            | Values defined by the Federal Maritime and Hydrographic Agency (BSH) for year 2026 |                           |
| MLW            | NHN - 1,69 m            |                                                                                    |                           |
| MTR            | 3,83 m                  |                                                                                    |                           |

#### Extreme values until 01.11.2025

| HW (since 1788)                                                                                                                                                                                                                                                                                        | LW (since 1901)                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. NHN + 6,45 m (03.01.1976) = HHW</b><br>2. + 6,08 m (06.12.2013)<br>3. + 6,02 m (28.01.1994)<br>4. + 6,02 m (10.01.1995)<br>5. + 5,95 m (03.12.1999)<br>6. + 5,87 m (19.02.2022)<br>7. + 5,81 m (24.11.1981)<br>8. + 5,76 m (23.01.1993)<br>9. + 5,75 m (28.02.1990)<br>10. + 5,74 m (05.02.1999) | <b>1. NHN - 3,64 m (18.03.2018) = LLW</b><br>2. - 3,50 m (20.10.2023)<br>3. - 3,48 m (02.03.1987)<br>4. - 3,48 m (21.10.2023)<br>5. - 3,46 m (01.03.2018)<br>6. - 3,45 m (18.12.1997)<br>7. - 3,41 m (18.03.2018)<br>8. - 3,39 m (07.02.2021)<br>9. - 3,38 m (15.02.1994)<br>10. - 3,38 m (01.03.2018) |

Mean annual number of tides above or below specified water levels (HW: period 2006 - 2025, LW: period 2016 - 2025)

| Mean annual number of exceedances (HW) of water level... ( $\Sigma = 706$ tides) | Mean annual number of underruns (LW) of water level... ( $\Sigma = 706$ tides) |                                     |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------|
| NHN + 4,00 m 2,7 - times                                                         | NHN - 1,60 m 445,1 - times                                                     | For detailed information see Fig. 3 |
| NHN + 3,00 m 25,4 - times                                                        | NHN - 2,00 m 114,4 - times                                                     |                                     |
| NHN + 2,20 m 288,3 - times                                                       | NHN - 2,40 m 13,4 - times                                                      |                                     |

#### Runoff at Neu Darchau gauge (m³/s) (Daily 6 a.m.-values)

|    | Year 2025          | 100-year period 1926 - 2025 | 5-year period 2021 - 2025 |
|----|--------------------|-----------------------------|---------------------------|
| LQ | 167 (13.07.2025) # | 145 (02.10.1947)            | 167 (13.07.2025) #        |
| MQ | 401                | 689                         | 541                       |
| HQ | 864 (17.01.2025)   | 4050 (11.06.2013)           | 2470 (04.01.2024) #       |

Water level data refer to the reference level valid at the time of occurrence. Data since 01.11.2019 refer to DHHN2016.

\*) Hydrological primary values calculated according to decision of HPA executive board from 19.04.2016.

# Value occurred multiple times in observation period after specified date.

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## Hydrological Information 2026

### Hydrological Year 2025

(01.11.2024 - 31.10.2025)

#### Hamburg - St. Pauli gauge

| Prim. values | Year 2025               | 5-year period 2021 - 2025 |
|--------------|-------------------------|---------------------------|
| HHW          | NHN + 4,04 m (20.12.24) | NHN + 5,87 m (19.02.22)   |
| LHW          | NHN + 0,58 m (11.02.25) | NHN - 0,44 m (20.10.23)   |
| HLW          | NHN + 0,39 m (05.10.25) | NHN + 1,68 m (17.02.22)   |
| LLW          | NHN - 3,07 m (11.02.25) | NHN - 3,50 m (20.10.23)   |
| MHW          | NHN + 2,15 m            | <b>NHN + 2,19 m*)</b>     |
| MLW          | NHN - 1,62 m            | <b>NHN - 1,64 m*)</b>     |
| MTR          | 3,77 m                  | <b>3,83 m</b>             |

#### Hamburg - Harburg gauge

| Prim. values | Year 2025               | 5-year period 2021 - 2025 |
|--------------|-------------------------|---------------------------|
| HHW          | NHN + 4,12 m (20.12.24) | NHN + 5,90 m (19.02.22)   |
| LHW          | NHN + 0,62 m (11.02.25) | NHN - 0,43 m (20.10.23)   |
| HLW          | NHN + 0,35 m (05.10.25) | NHN + 1,67 m (17.02.22)   |
| LLW          | NHN - 2,95 m (11.02.25) | NHN - 3,41 m (21.10.23)   |
| MHW          | NHN + 2,19 m            | NHN + 2,24 m              |
| MLW          | NHN - 1,62 m            | NHN - 1,64 m              |
| MTR          | 3,81 m                  | 3,88 m                    |

#### Seemannshöft gauge

| Prim. values | Year 2025               | 5-year period 2021 - 2025 |
|--------------|-------------------------|---------------------------|
| HHW          | NHN + 3,95 m (20.12.24) | NHN + 5,79 m (19.02.22)   |
| LHW          | NHN + 0,53 m (11.02.25) | NHN - 0,48 m (20.10.23)   |
| HLW          | NHN + 0,44 m (05.10.25) | NHN + 1,66 m (17.02.22)   |
| LLW          | NHN - 3,03 m (11.02.25) | NHN - 3,45 m (21.10.23)   |
| MHW          | NHN + 2,10 m            | NHN + 2,13 m              |
| MLW          | NHN - 1,56 m            | NHN - 1,59 m              |
| MTR          | 3,66 m                  | 3,72 m                    |

#### U.F. Blankenese gauge

| Prim. values | Year 2025               | 5-year period 2021 - 2025 |
|--------------|-------------------------|---------------------------|
| HHW          | NHN + 3,86 m (20.12.24) | NHN + 5,71 m (19.02.22)   |
| LHW          | NHN + 0,47 m (11.02.25) | NHN - 0,52 m (20.10.23)   |
| HLW          | NHN + 0,46 m (05.10.25) | NHN + 1,65 m (17.02.22)   |
| LLW          | NHN - 2,98 m (11.02.25) | NHN - 3,41 m (21.10.23)   |
| MHW          | NHN + 2,02 m            | NHN + 2,06 m              |
| MLW          | NHN - 1,53 m            | NHN - 1,55 m              |
| MTR          | 3,55 m                  | 3,61 m                    |

#### Bunthaus gauge

| Prim. values | Year 2025               | 5-year period 2021 - 2025 |
|--------------|-------------------------|---------------------------|
| HHW          | NHN + 4,21 m (20.12.24) | NHN + 5,91 m (19.02.22)   |
| LHW          | NHN + 0,70 m (11.02.25) | NHN - 0,36 m (20.10.23)   |
| HLW          | NHN + 0,36 m (05.10.25) | NHN + 1,76 m (17.02.22)   |
| LLW          | NHN - 2,21 m (11.02.25) | NHN - 2,80 m (21.10.23)   |
| MHW          | NHN + 2,27 m            | NHN + 2,33 m              |
| MLW          | NHN - 1,32 m            | NHN - 1,26 m              |
| MTR          | 3,59 m                  | 3,59 m                    |

#### Schöpfstelle gauge

| Prim. values | Year 2025               | 5-year period 2021 - 2025 |
|--------------|-------------------------|---------------------------|
| HHW          | NHN + 4,12 m (20.12.24) | NHN + 5,90 m (19.02.22)   |
| LHW          | NHN + 0,62 m (11.02.25) | NHN - 0,42 m (20.10.23)   |
| HLW          | NHN + 0,35 m (05.10.25) | NHN + 1,69 m (17.02.22)   |
| LLW          | NHN - 2,76 m (11.02.25) | NHN - 3,23 m (21.10.23)   |
| MHW          | NHN + 2,21 m            | NHN + 2,26 m              |
| MLW          | NHN - 1,55 m            | NHN - 1,56 m              |
| MTR          | 3,76 m                  | 3,82 m                    |

Water level data refer to the reference level valid at the time of occurrence. Data since 01.11.2019 refer to DHHN2016.

\*) Hydrological primary values calculated according to decision of HPA executive board from 19.04.2016.

# Value occurred multiple times in observation period after specified date.

## Hydrological Terms

| Term                                                          | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------|---------|---------------------|--------------|---------------------|---------------|---------------------|--------------|---------------------|----------|---------------------|
| NHN = Normalhöhennull<br>( <i>"standard elevation zero"</i> ) | Officially defined reference plane for height measurements in the Federal Republic of Germany. Water level data in this information refer to the reference level valid at the time of occurrence.<br>Data since 01.11.2019 refer to DHHN2016.                                                                                                                                                                                                                                                                                                     |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| SKN = Seekartennull<br>(= Lowest Astronomical Tide, LAT)      | Officially defined reference plane for depth measurements at sea and in tidal rivers. Seekartennull (LAT) is defined as the lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. In Hamburg SKN (LAT) has been fixed at NHN - 1.90 m since 01.01.2005.                                                                                                                                                                                                 |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| KN = Kartennull<br>(= Chart datum, CD)                        | In the port of Hamburg, Kartennull (KN) exists parallel to SKN (LAT). KN is based on the height of the local MLW (Mean Low Water). Since 01.05.2016 KN has been fixed at NHN -1.60 m.                                                                                                                                                                                                                                                                                                                                                             |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| PNP = Pegelnullpunkt<br>(= Gauge datum)                       | Altitude of gauge datum related to Normalhöhennull (NHN). Gauge datum of the tidal gauges within the Hamburg port area since 01.11.2019 are as follows:<br><br><table> <tr> <td>St. Pauli</td><td>-500.4 cm NHN (DHHN2016)</td></tr> <tr> <td>Harburg</td><td>-501.5 cm NHN ( " )</td></tr> <tr> <td>Seemannshöft</td><td>-501.7 cm NHN ( " )</td></tr> <tr> <td>UF Blankenese</td><td>-501.8 cm NHN ( " )</td></tr> <tr> <td>Schöpfstelle</td><td>-501.8 cm NHN ( " )</td></tr> <tr> <td>Bunthaus</td><td>-501.7 cm NHN ( " )</td></tr> </table> | St. Pauli | -500.4 cm NHN (DHHN2016) | Harburg | -501.5 cm NHN ( " ) | Seemannshöft | -501.7 cm NHN ( " ) | UF Blankenese | -501.8 cm NHN ( " ) | Schöpfstelle | -501.8 cm NHN ( " ) | Bunthaus | -501.7 cm NHN ( " ) |
| St. Pauli                                                     | -500.4 cm NHN (DHHN2016)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| Harburg                                                       | -501.5 cm NHN ( " )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| Seemannshöft                                                  | -501.7 cm NHN ( " )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| UF Blankenese                                                 | -501.8 cm NHN ( " )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| Schöpfstelle                                                  | -501.8 cm NHN ( " )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| Bunthaus                                                      | -501.7 cm NHN ( " )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| HW = High Water                                               | Highest value of the tidal curve between two consecutive LW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| LW = Low Water                                                | Lowest value of the tidal curve between two consecutive HW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| TR = Tidal Range                                              | Mean difference in height between HW and the two neighbouring LW.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| MTR = Mean Tidal Range                                        | Average of all tidal ranges observed over a period of one year or several years.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| HHW = Highest High Water                                      | Highest observed HW (in a period of time).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| LHW = Lowest High Water                                       | Lowest observed HW (in a period of time).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| MHW / MLW = Mean High Water / Mean Low Water                  | Average of all daily tidal high (or low) water levels observed over a period of one year or several years.                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| HLW = Highest Low Water                                       | Highest observed LW (in a period of time).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| LLW = Lowest Low Water                                        | Lowest observed LW (in a period of time).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |
| Tmw = Tidemittelwasser<br>(= Mean Tide Level, MTL)            | Water level of the horizontal gravity line of a tidal curve. MTmw (MTL) at Hamburg - St. Pauli for the period 2021 - 2025 is NHN +0.42 m.<br>MTL corresponds to MSL (Mean Sea Level).                                                                                                                                                                                                                                                                                                                                                             |           |                          |         |                     |              |                     |               |                     |              |                     |          |                     |

## Attachment

### Hydrological Information 2026 (Hydrological Year 2025)

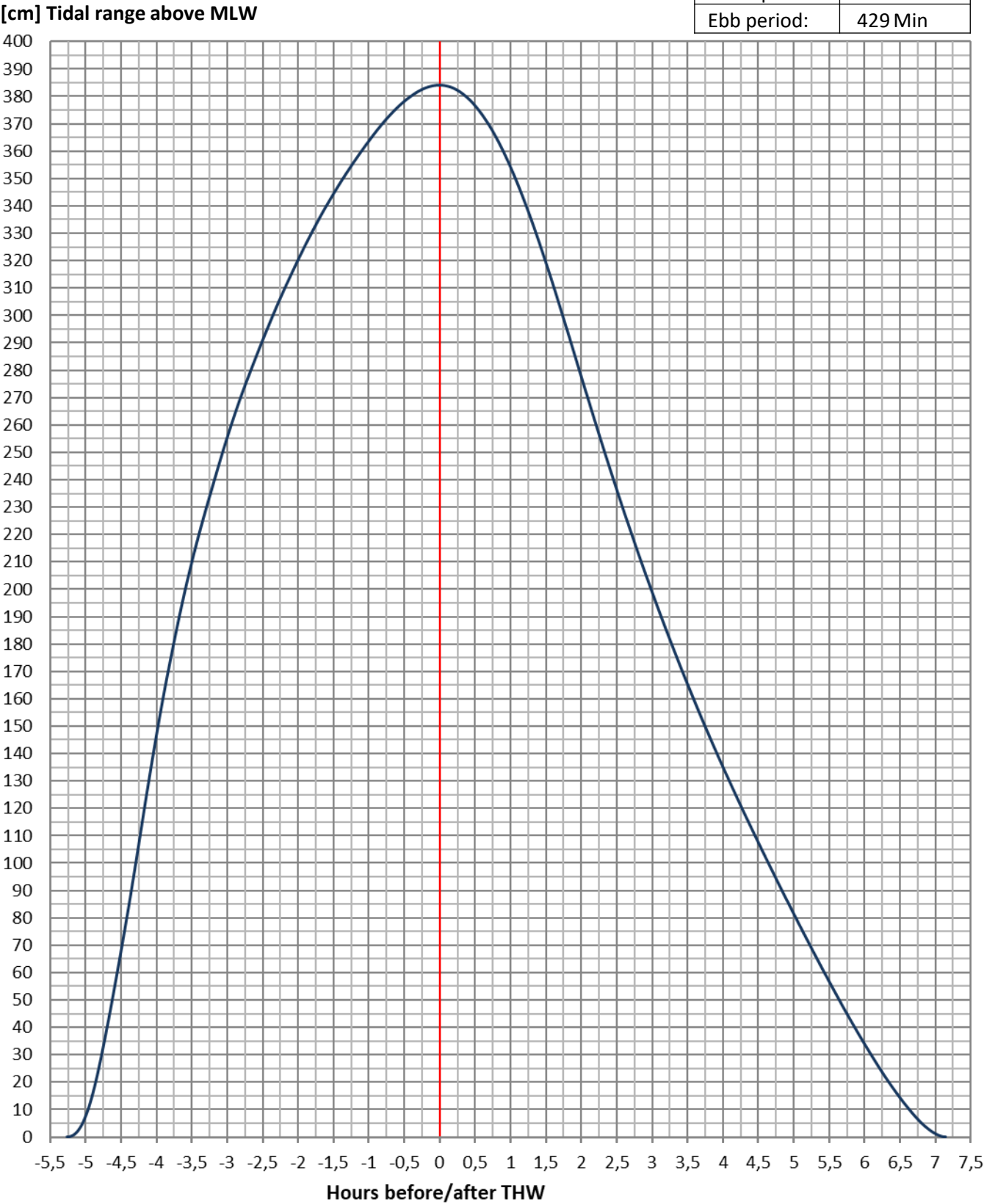
- Fig. 1: Mean tide curve Hamburg-St. Pauli gauge, hydrological years 2021-2025
- Fig. 2: Mean High Water, Mean Low Water and Mean Tidal Range at Hamburg-St. Pauli gauge since 1950
- Fig. 3: Mean annual number of tides above or below specified water levels
- Fig. 4: Number of storm surges at Hamburg-St. Pauli gauge since 1951
- Fig. 5a: Elbe runoff at Neu Darchau gauge:  
Annual mean values since 1990
- Fig. 5b: Elbe runoff at Neu Darchau gauge:  
Monthly mean values 2025 and long-term monthly mean values
- Fig. 6: Reference horizons and hydrological parameters in the port of Hamburg (Hamburg-St. Pauli gauge)

HPA WI22 (Hydrology), 15.01.2026  
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Fig. 1

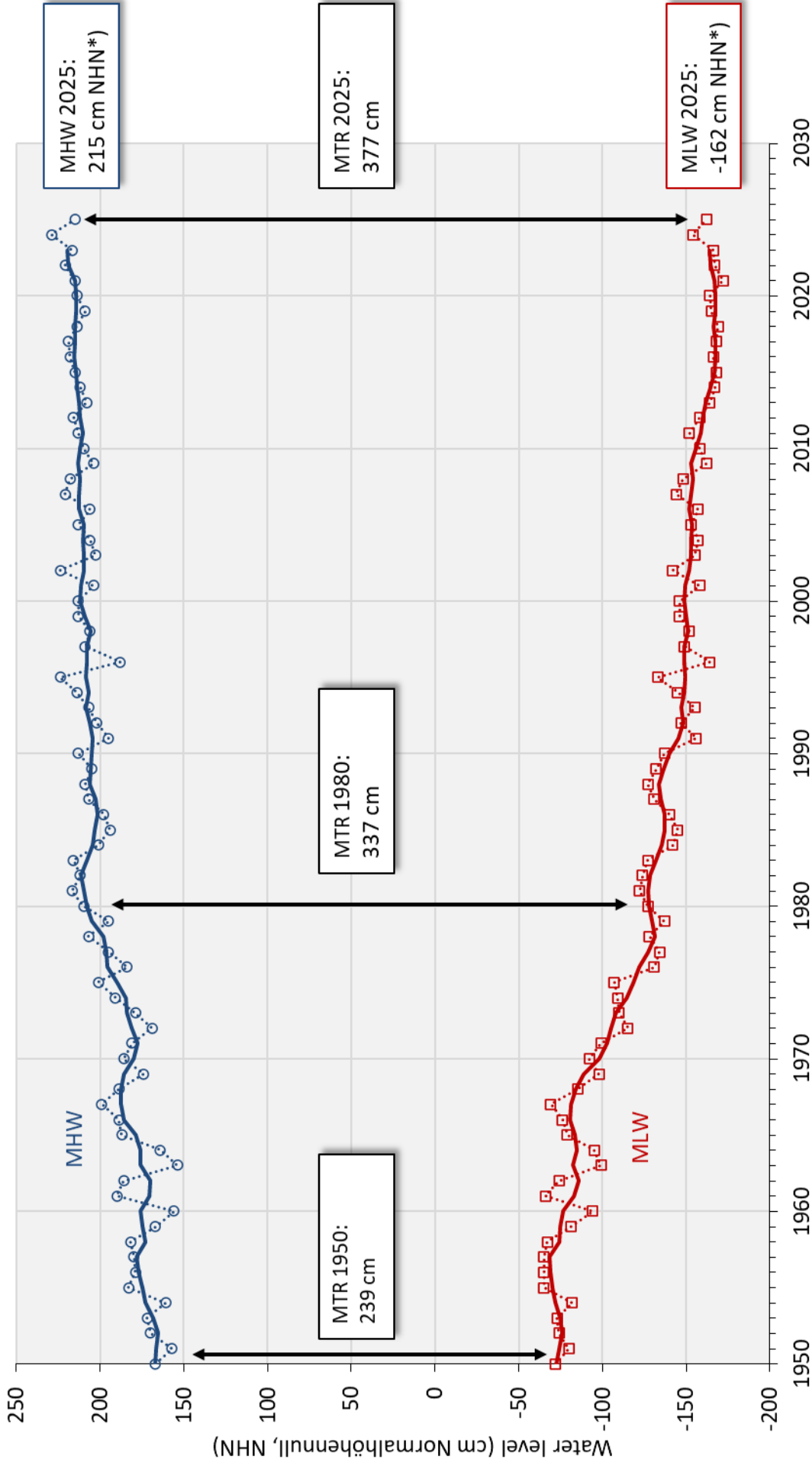
Mean tide curve at **St. Pauli gauge**  
Hydrological years: **2021 - 2025**

| Parameters:   |             |
|---------------|-------------|
| MTR:          | 3,83 m      |
| MHW:          | 2,19 m NNH  |
| MLW:          | -1,64 m NHN |
| Flood period: | 316 Min     |
| Ebb period:   | 429 Min     |



MHW, MLW and MTR at Hamburg-St. Pauli gauge since 1950  
- Annual mean values and 5-year mean values -

Fig. 2



\*) Hydrological primary values (Mean 2021-2025): MHW 219 cm NHN, MLW -164 cm NHN, MTR 383 cm

Fig. 3

## Mean annual number of tides above or below specified water levels

### Hamburg - St. Pauli gauge

| HW<br>Water Level<br>(m NHN) | Number of<br>Exceedances<br>per Year | Frequency<br>(%) |
|------------------------------|--------------------------------------|------------------|
| 2,20                         | 288,3                                | 40,85%           |
| 2,40                         | 154,5                                | 21,88%           |
| 2,60                         | 80,0                                 | 11,33%           |
| 2,80                         | 43,5                                 | 6,16%            |
| 3,00                         | 25,4                                 | 3,59%            |
| 3,20                         | 14,9                                 | 2,10%            |
| 3,40                         | 9,6                                  | 1,36%            |
| 3,60                         | 6,3                                  | 0,89%            |
| 3,80                         | 3,9                                  | 0,55%            |
| 4,00                         | 2,7                                  | 0,38%            |
| 4,20                         | 1,6                                  | 0,23%            |

Data Basis: 2006 - 2025 (20 Years)

### Hamburg - Harburg gauge

| HW<br>Water Level<br>(m NHN) | Number of<br>Exceedances<br>per Year | Frequency<br>(%) |
|------------------------------|--------------------------------------|------------------|
| 2,20                         | 337,7                                | 47,85%           |
| 2,40                         | 190,3                                | 26,96%           |
| 2,60                         | 100,9                                | 14,30%           |
| 2,80                         | 53,5                                 | 7,58%            |
| 3,00                         | 30,6                                 | 4,34%            |
| 3,20                         | 17,6                                 | 2,49%            |
| 3,40                         | 11,0                                 | 1,55%            |
| 3,60                         | 7,5                                  | 1,06%            |
| 3,80                         | 4,7                                  | 0,67%            |
| 4,00                         | 3,0                                  | 0,42%            |
| 4,20                         | 1,9                                  | 0,26%            |

Data Basis: 2006 - 2025 (20 Years)

| LW<br>Water Level<br>(m NHN) | Number of<br>Underruns<br>per Year | Frequency<br>(%) |
|------------------------------|------------------------------------|------------------|
| -1,60                        | 445,2                              | 63,07%           |
| -1,70                        | 360,0                              | 51,00%           |
| -1,80                        | 266,7                              | 37,78%           |
| -1,90                        | 176,7                              | 25,03%           |
| -2,00                        | 107,0                              | 15,16%           |
| -2,10                        | 58,7                               | 8,32%            |
| -2,20                        | 32,5                               | 4,60%            |
| -2,30                        | 18,3                               | 2,59%            |
| -2,40                        | 10,9                               | 1,54%            |
| -2,50                        | 7,2                                | 1,02%            |
| -2,60                        | 4,8                                | 0,68%            |

Data Basis: 2016 - 2025 (10 Years)

### Seemannshöft gauge

| HW<br>Water Level<br>(m NHN) | Number of<br>Exceedances<br>per Year | Frequency<br>(%) |
|------------------------------|--------------------------------------|------------------|
| 2,20                         | 249,8                                | 35,39%           |
| 2,40                         | 129,1                                | 18,28%           |
| 2,60                         | 66,2                                 | 9,38%            |
| 2,80                         | 36,9                                 | 5,22%            |
| 3,00                         | 21,2                                 | 3,00%            |
| 3,20                         | 12,9                                 | 1,83%            |
| 3,40                         | 8,3                                  | 1,17%            |
| 3,60                         | 5,4                                  | 0,77%            |
| 3,80                         | 3,5                                  | 0,49%            |
| 4,00                         | 2,1                                  | 0,29%            |
| 4,20                         | 1,4                                  | 0,20%            |

Data Basis: 2006 - 2025 (20 Years)

### U.F. Blankenese gauge

| HW<br>Water Level<br>(m NHN) | Number of<br>Exceedances<br>per Year | Frequency<br>(%) |
|------------------------------|--------------------------------------|------------------|
| 2,20                         | 203,7                                | 28,85%           |
| 2,40                         | 104,9                                | 14,86%           |
| 2,60                         | 54,5                                 | 7,71%            |
| 2,80                         | 31,0                                 | 4,39%            |
| 3,00                         | 17,7                                 | 2,50%            |
| 3,20                         | 11,1                                 | 1,57%            |
| 3,40                         | 7,3                                  | 1,03%            |
| 3,60                         | 4,5                                  | 0,63%            |
| 3,80                         | 3,1                                  | 0,44%            |
| 4,00                         | 2,0                                  | 0,28%            |
| 4,20                         | 1,3                                  | 0,18%            |

Data Basis: 2006 - 2025 (20 Years)

| LW<br>Water Level<br>(m NHN) | Number of<br>Underruns<br>per Year | Frequency<br>(%) |
|------------------------------|------------------------------------|------------------|
| -1,60                        | 347,0                              | 49,16%           |
| -1,70                        | 252,1                              | 35,71%           |
| -1,80                        | 167,5                              | 23,73%           |
| -1,90                        | 104,0                              | 14,73%           |
| -2,00                        | 59,3                               | 8,40%            |
| -2,10                        | 33,4                               | 4,73%            |
| -2,20                        | 19,2                               | 2,72%            |
| -2,30                        | 11,6                               | 1,64%            |
| -2,40                        | 8,2                                | 1,16%            |
| -2,50                        | 5,2                                | 0,74%            |
| -2,60                        | 3,6                                | 0,51%            |

Data Basis: 2016 - 2025 (10 Years)

### Bunthaus gauge

| HW<br>Water Level<br>(m NHN) | Number of<br>Exceedances<br>per Year | Frequency<br>(%) |
|------------------------------|--------------------------------------|------------------|
| 2,20                         | 413,9                                | 58,64%           |
| 2,40                         | 255,1                                | 36,14%           |
| 2,60                         | 137,6                                | 19,50%           |
| 2,80                         | 72,4                                 | 10,26%           |
| 3,00                         | 40,7                                 | 5,76%            |
| 3,20                         | 23,4                                 | 3,32%            |
| 3,40                         | 14,3                                 | 2,02%            |
| 3,60                         | 8,8                                  | 1,24%            |
| 3,80                         | 5,9                                  | 0,84%            |
| 4,00                         | 3,7                                  | 0,52%            |
| 4,20                         | 2,5                                  | 0,35%            |

Data Basis: 2006 - 2025 (20 Years)

### Schöpfstelle gauge

| HW<br>Water Level<br>(m NHN) | Number of<br>Exceedances<br>per Year | Frequency<br>(%) |
|------------------------------|--------------------------------------|------------------|
| 2,20                         | 353,1                                | 50,02%           |
| 2,40                         | 203,0                                | 28,76%           |
| 2,60                         | 108,0                                | 15,30%           |
| 2,80                         | 56,6                                 | 8,02%            |
| 3,00                         | 32,6                                 | 4,61%            |
| 3,20                         | 18,4                                 | 2,61%            |
| 3,40                         | 11,4                                 | 1,62%            |
| 3,60                         | 7,4                                  | 1,04%            |
| 3,80                         | 4,8                                  | 0,67%            |
| 4,00                         | 3,1                                  | 0,44%            |
| 4,20                         | 1,9                                  | 0,26%            |

Data Basis: 2006 - 2025 (20 Years)

| LW<br>Water Level<br>(m NHN) | Number of<br>Underruns<br>per Year | Frequency<br>(%) |
|------------------------------|------------------------------------|------------------|
| -1,60                        | 370,9                              | 52,54%           |
| -1,70                        | 275,0                              | 38,96%           |
| -1,80                        | 179,7                              | 25,46%           |
| -1,90                        | 106,7                              | 15,12%           |
| -2,00                        | 54,8                               | 7,76%            |
| -2,10                        | 30,5                               | 4,32%            |
| -2,20                        | 16,3                               | 2,31%            |
| -2,30                        | 9,9                                | 1,40%            |
| -2,40                        | 6,6                                | 0,93%            |
| -2,50                        | 4,6                                | 0,65%            |
| -2,60                        | 3,0                                | 0,42%            |

Data Basis: 2016 - 2025 (10 Years)

Information on the frequency of occurrence of even higher or lower water levels should only be provided on the basis of separate long-term statistical evaluations including historical data.

If required, please contact [hydrologie@hpa.hamburg.de](mailto:hydrologie@hpa.hamburg.de).

Linear extrapolation and interpolation of the table values is not appropriate.

Number of storm surges at Hamburg - St. Pauli gauge since 1951

Fig. 4

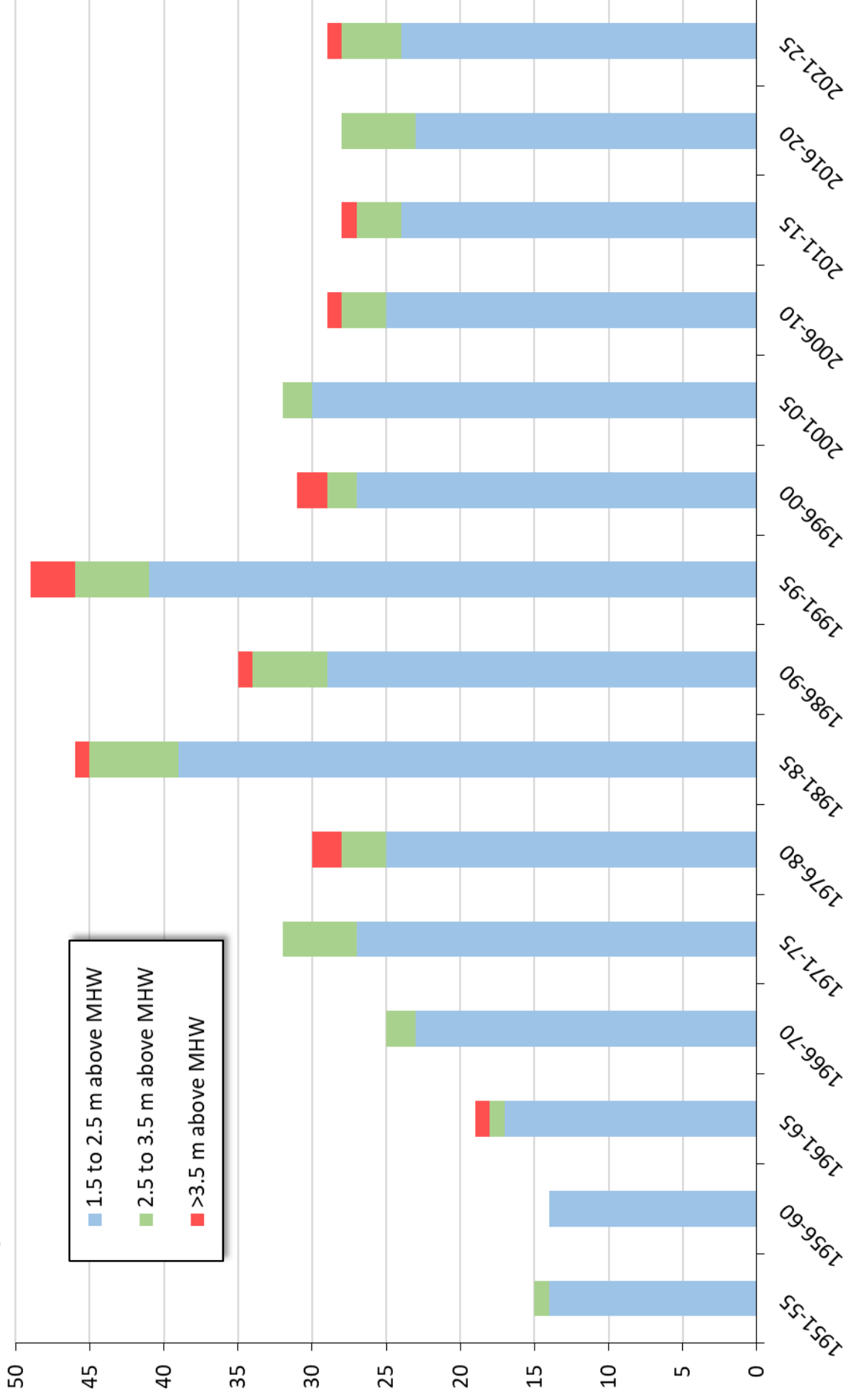


Fig. 5a and 5b

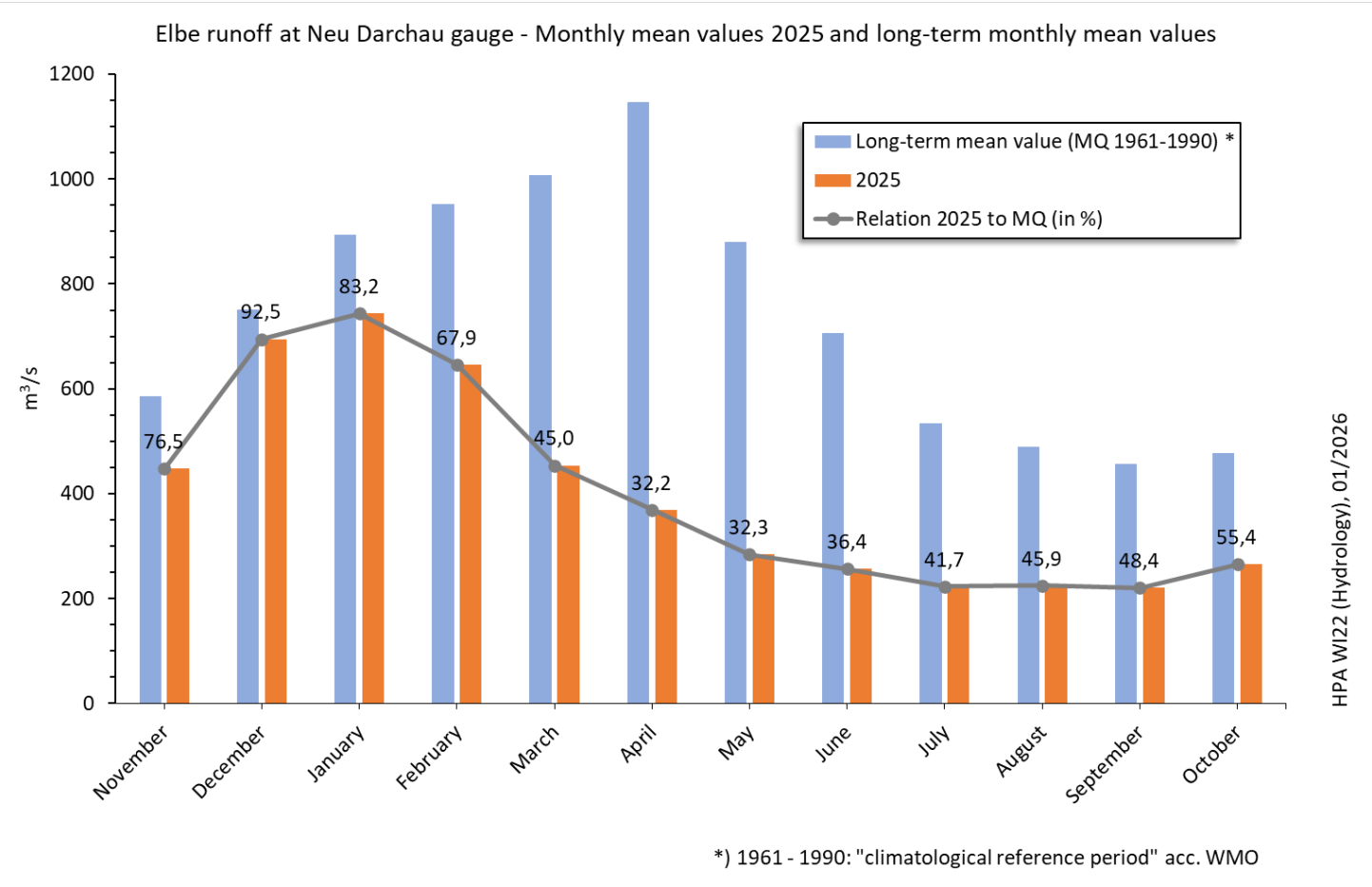
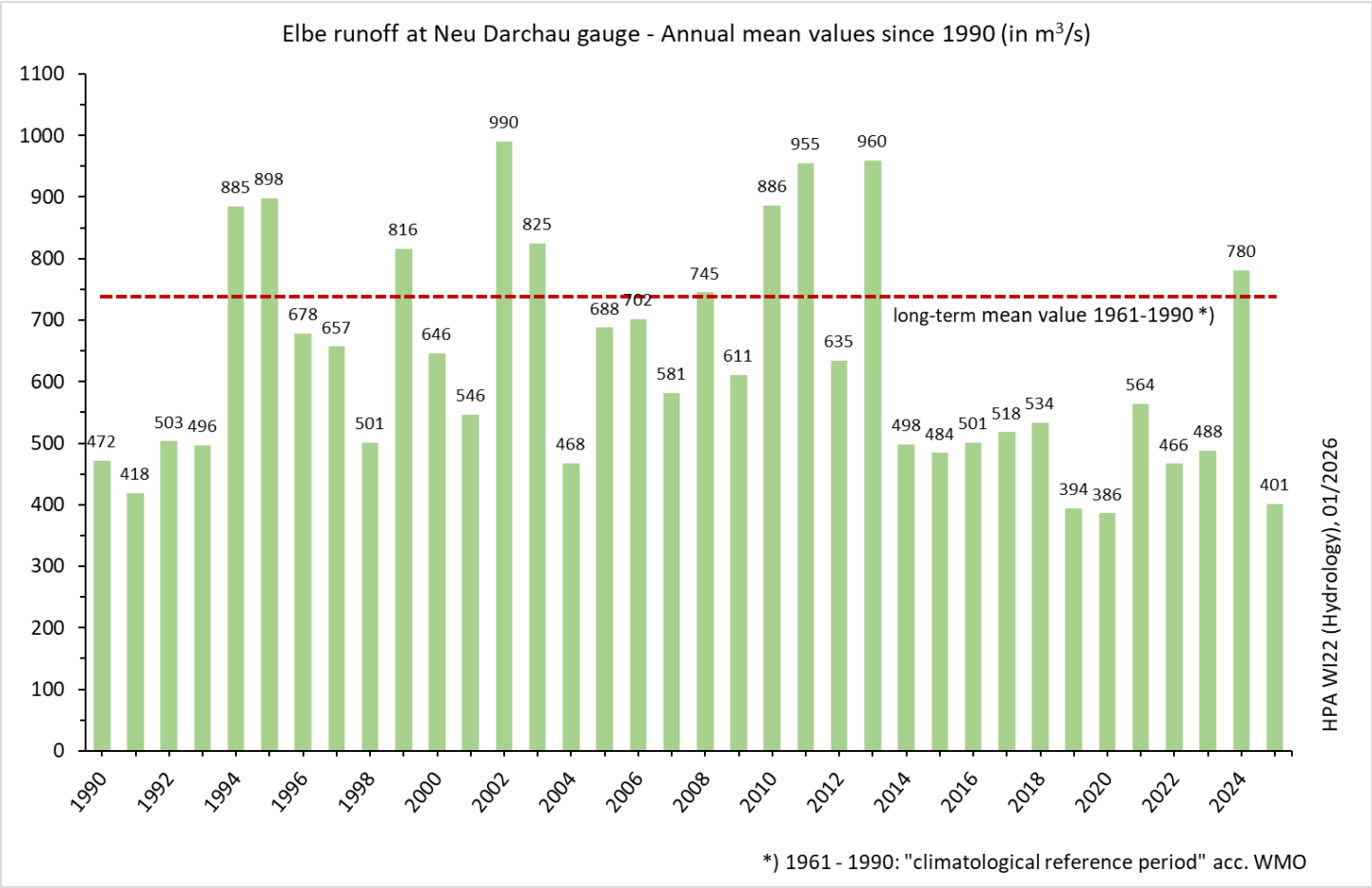


Fig. 6  
Reference horizons and hydrological parameters  
in the port of Hamburg (St. Pauli gauge)

Status: 01/2026

