



# S-111 and S-126

SURFACE CURRENTS AND THE PHYSICAL ENVIRONMENT  
*FROM THE DATA AND THE NL TIDES*

briana sullivan

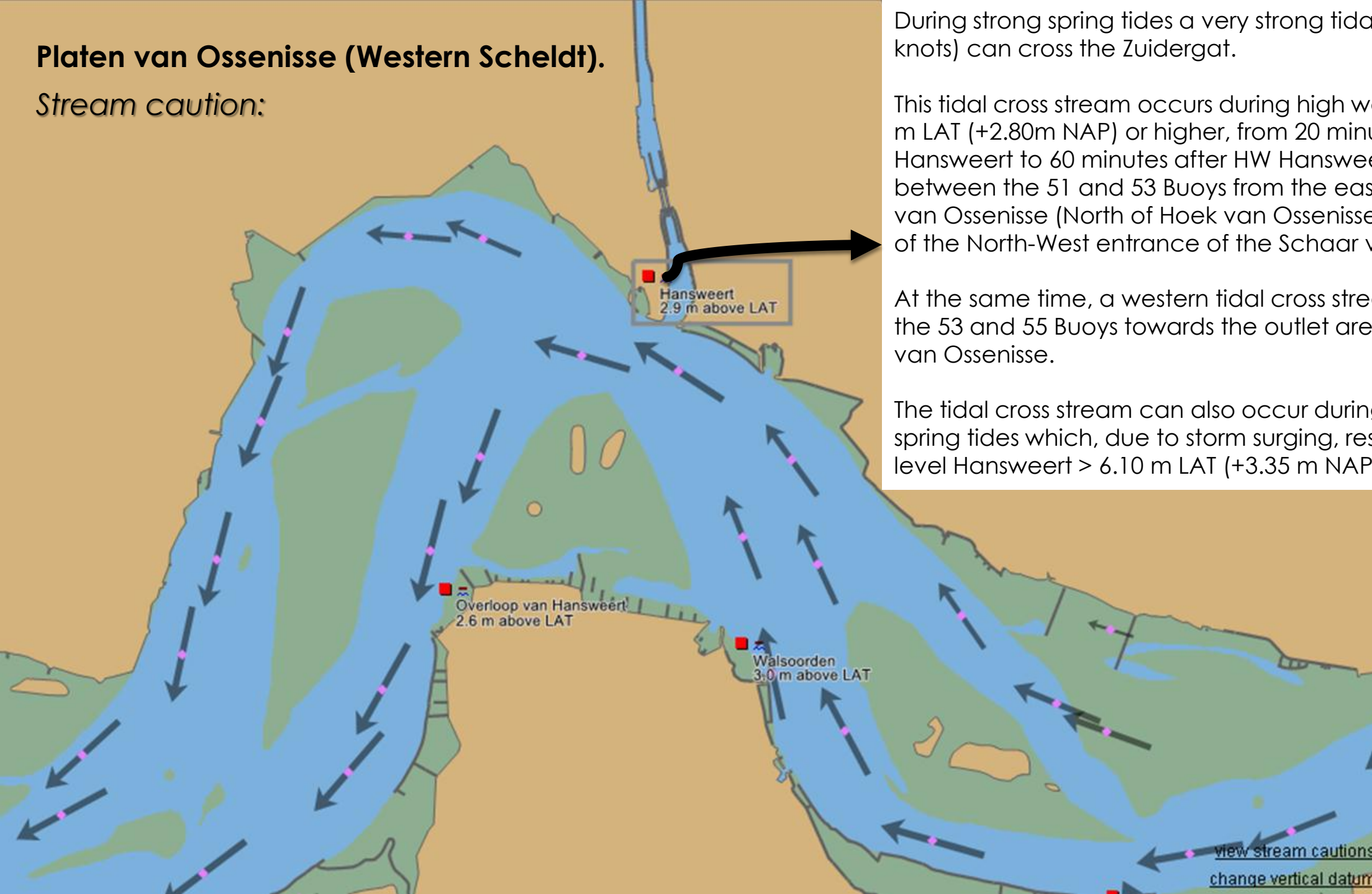
# Example from the Netherlands

A case of combining the portrayal of modeled tidal data with NL Tides stream cautions:

- ▶ The model will only show so much detail.
- ▶ The stream caution is more effective with a visual next to it.

## Platen van Ossenis (Western Scheldt).

*Stream caution:*



During strong spring tides a very strong tidal stream (2.5 to 5 knots) can cross the Zuidergat.

This tidal cross stream occurs during high water levels of 5.60 m LAT (+2.80m NAP) or higher, from 20 minutes before HW Hansweert to 60 minutes after HW Hansweert, and runs between the 51 and 53 Buoys from the eastern part of Platen van Ossenis (North of Hoek van Ossenis) in the direction of the North-West entrance of the Schaar van Waarde.

At the same time, a western tidal cross stream runs between the 53 and 55 Buoys towards the outlet area of the Schaar van Ossenis.

The tidal cross stream can also occur during less developed spring tides which, due to storm surging, result in a water level Hansweert > 6.10 m LAT (+3.35 m NAP).

### TEMPORAL CONDITIONS

During strong **spring tides**

From **20 minutes before ...to 60 minutes after**

during **high water levels**

### PHYSICAL CONDITIONS

**Between** the 51 and 53 Buoys

**From** the eastern part

**Towards** the outlet area

**In the direction of** the North-West entrance

### LOCATION CONDITIONS

**During** strong **spring tides** a very strong tidal stream (2.5 to 5 knots) can cross the Zuidergat.

This tidal cross stream occurs **during high water levels** of 5.60 m LAT (+2.80m NAP) or higher, **from 20 minutes before HW Hansweert to 60 minutes after HW Hansweert**, and runs **between the 51 and 53 Buoys** from **the eastern part** of Platen van Ossensisse (North of Hoek van Ossensisse) **in the direction of** the North-West entrance of the Schaar van Waarde.

At the same time, a western tidal cross stream **runs between the 53 and 55 Buoys towards the outlet area** of the Schaar van Ossensisse.

The tidal cross stream can also occur **during less developed spring tides** which, due to storm surging, result in a water level Hansweert > 6.10 m LAT (+3.35 m NAP)l.

<feature id="1">    <feature\_name>Zuidergat</feature\_name> </feature>

<temporalCondition id= 1>

  <when>spring tide</when>

  <timeFrom>20 minutes before HW</timeFrom>

  <timeTo>60 minutes after HW</timeTo>

</temporalCondition>

<physicalCondition id=1>

  <type>high water levels</type>

  <value units="m">5.6</value>

  <valueplus units="m" type="+" label="NAP">2.80</valueplus>

</physicalCondition >

<area id=1>    <betweenHere>51 Buoy</betweenHere>    <betweenThere>53 Buoy</betweenThere> </area>

<direction>

  <fromLoc>the eastern part of Platen van Ossenissee</fromLoc>

  <toLoc>the North-West entrance of the Schaar van Waarde</toLoc>

</direction>

<physicalImpact id="2">

  <appliesTo type="feature">1</appliesTo>

  <tidalCrossStream>

    <strengthRange>2 - 5</strengthRange>

    <physicalCondition applies="during">1</physicalCondition>

  </ tidalCrossStream >

  <temporalCondition appliesTo="Hansweert">1</temporalCondition>

  <area>1</area>

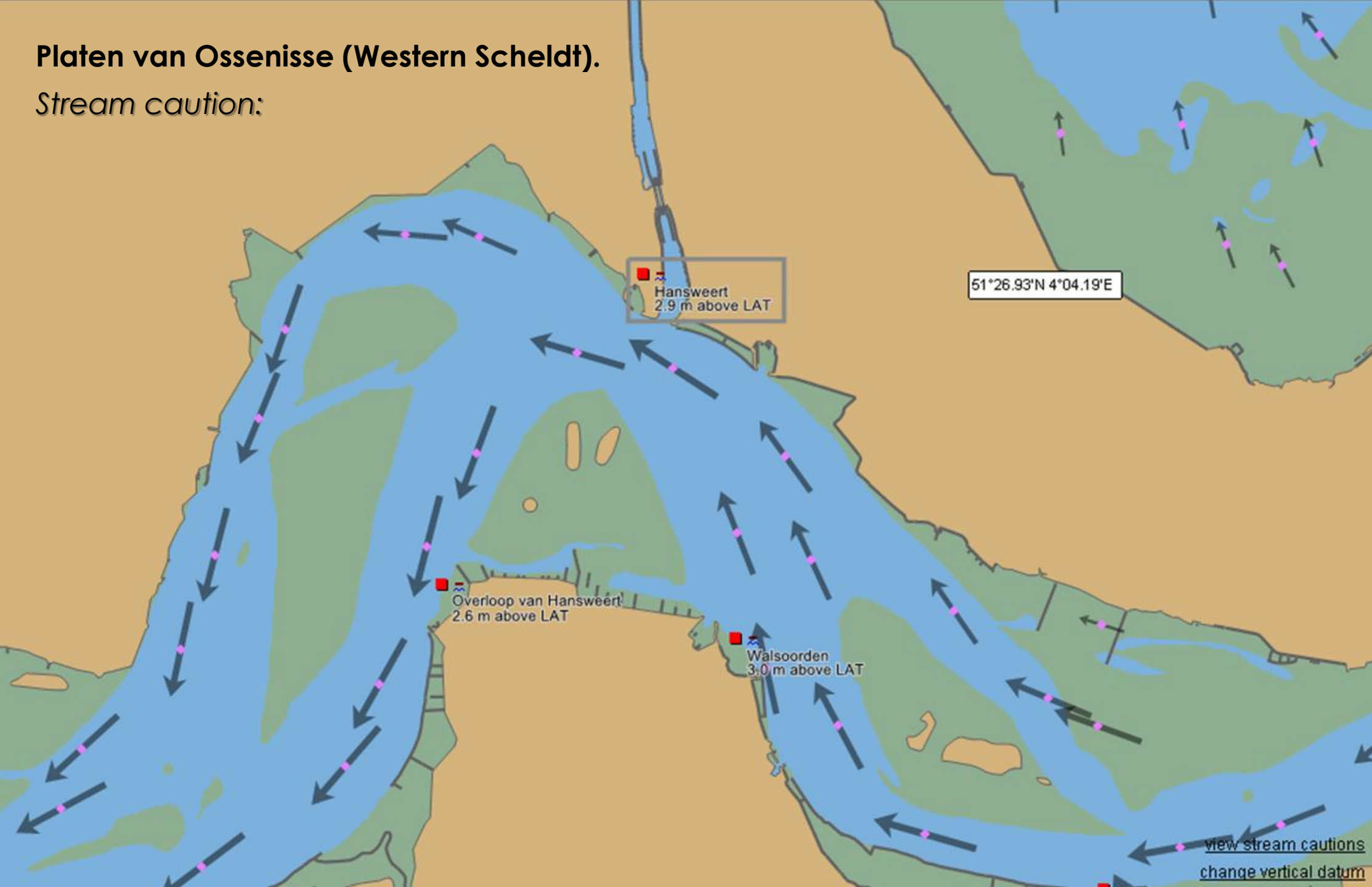
  <direction>1</direction>

</physicalImpact>



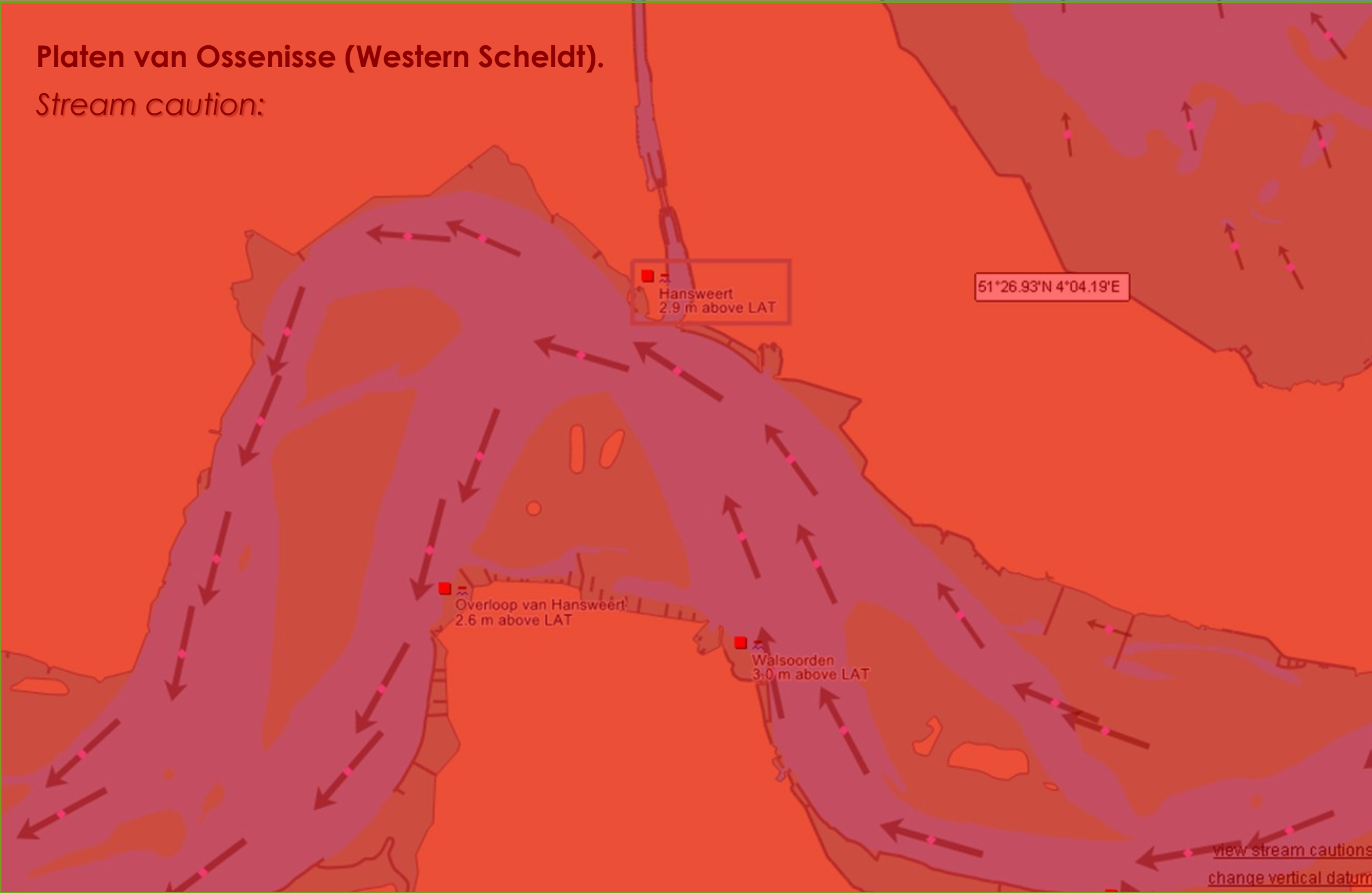
# Platen van Ossenisse (Western Scheldt).

Stream caution:



## Platen van Ossenisse (Western Scheldt).

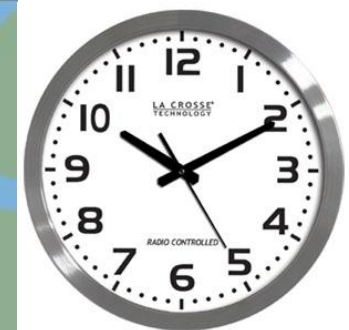
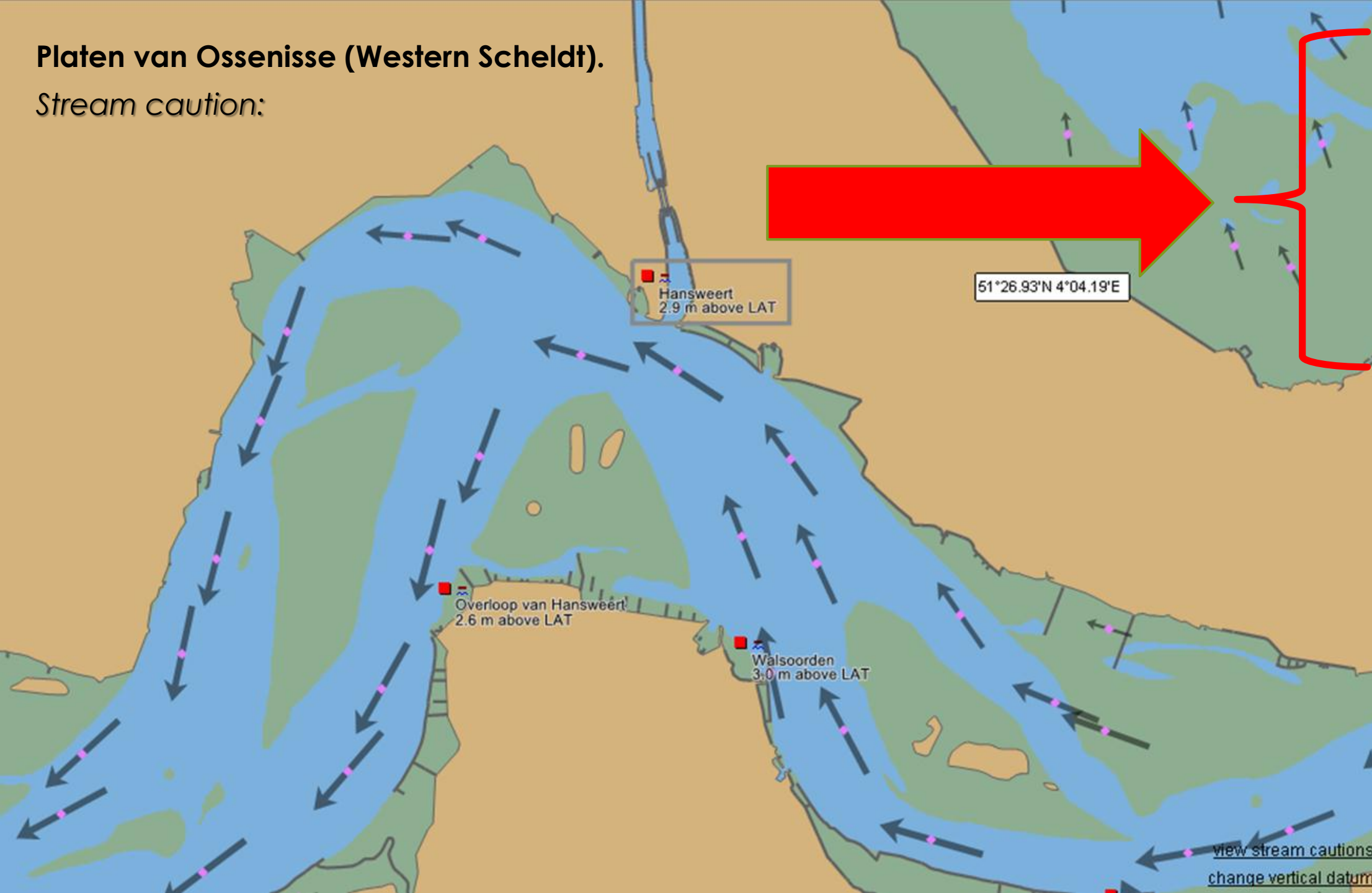
*Stream caution:*



location ✓

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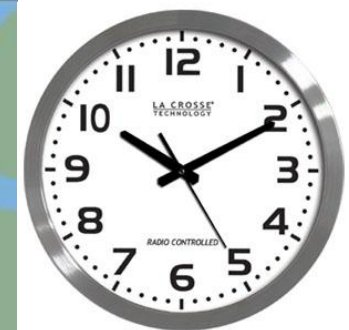
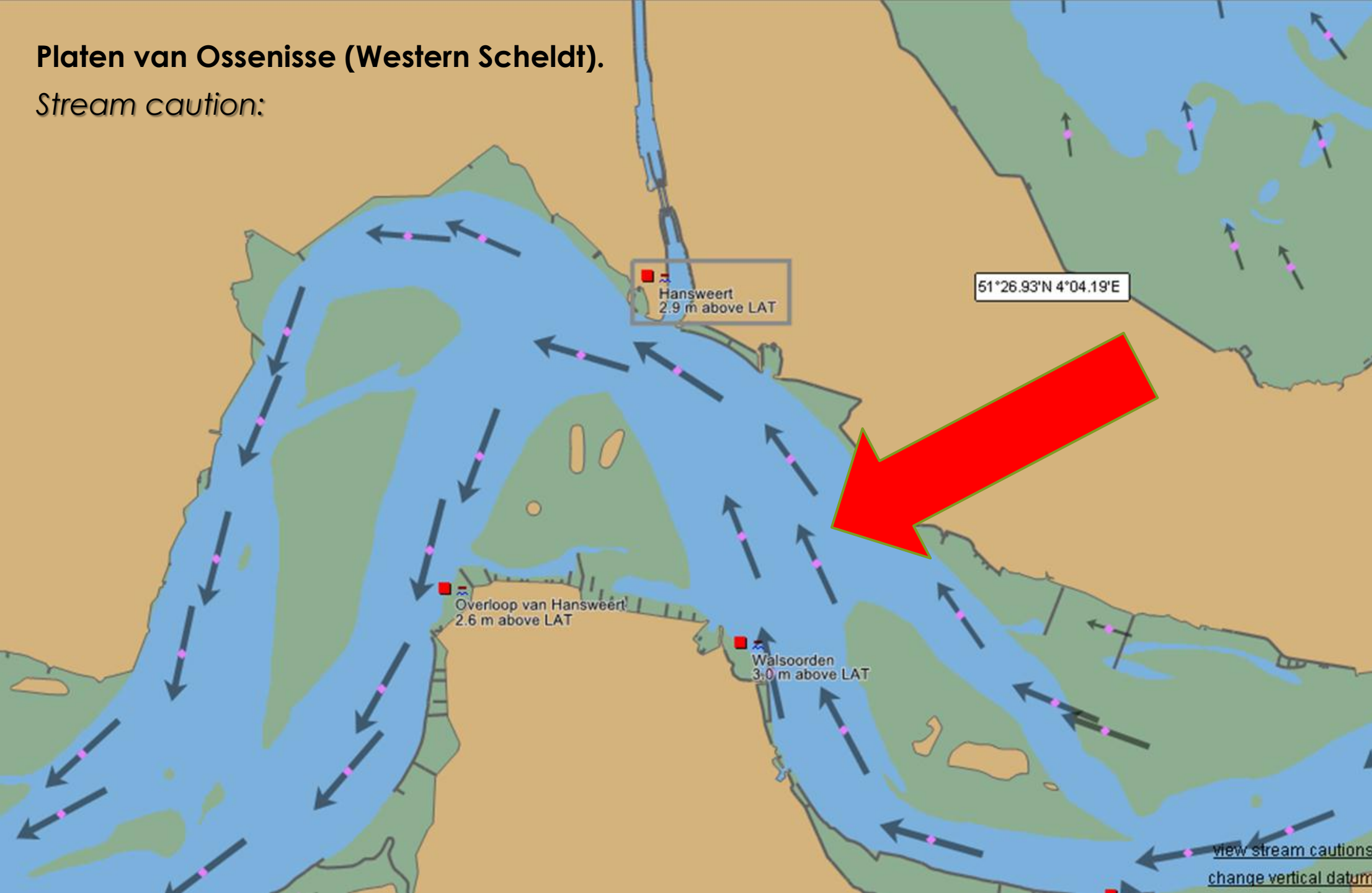


location ✓  
date/time ✓



## Platen van Ossenisse (Western Scheldt).

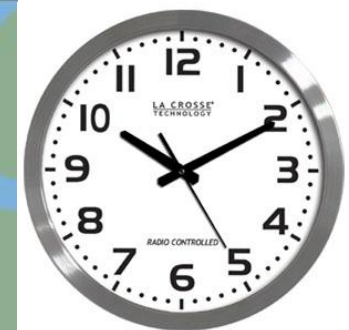
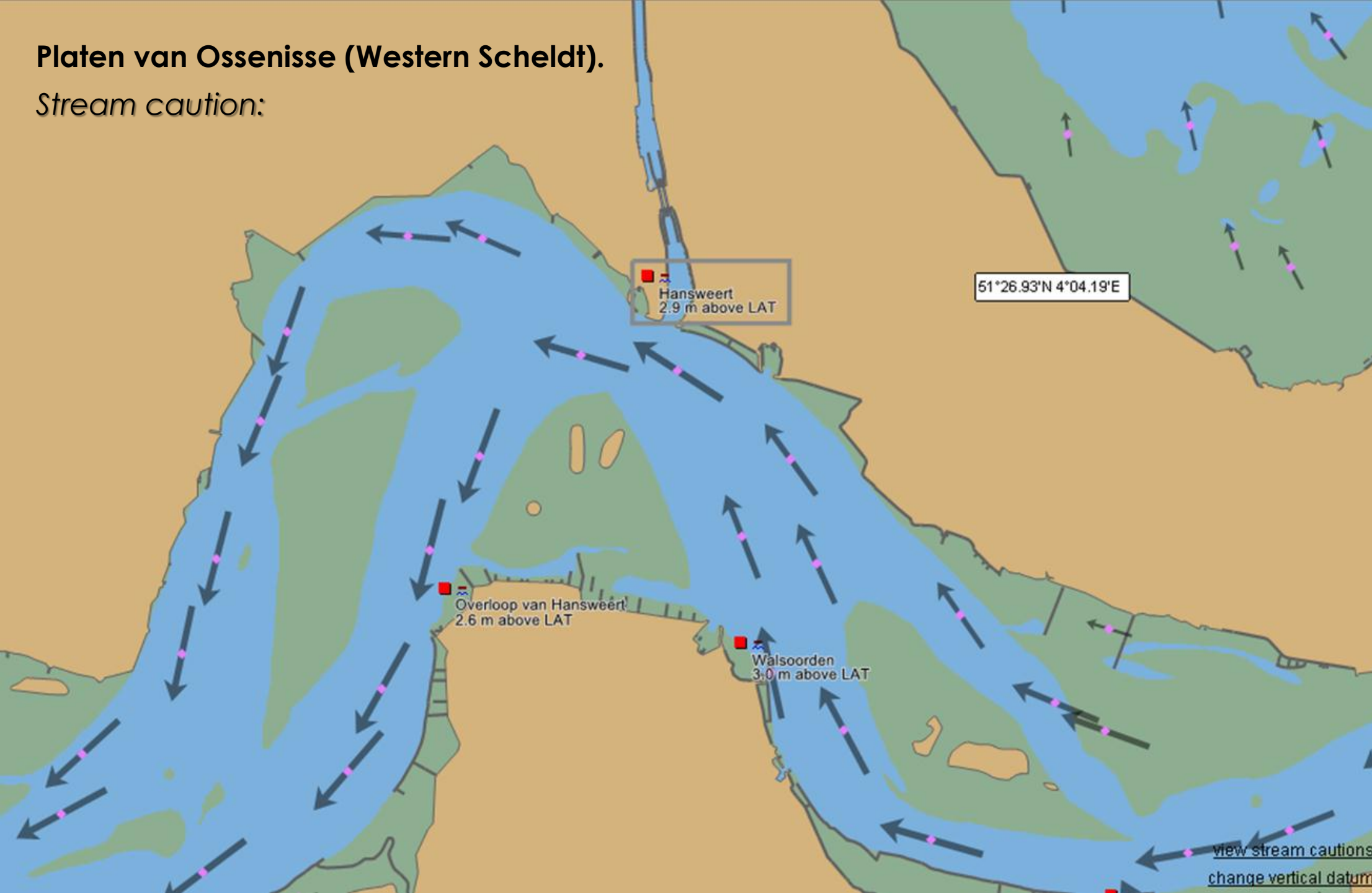
*Stream caution:*



location ✓  
date/time ✓  
tidal data ✓

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Stream caution:

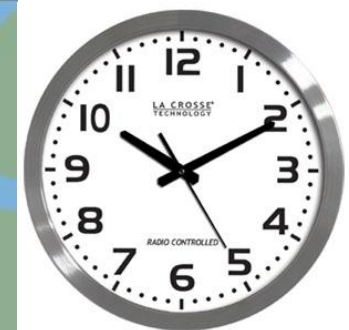
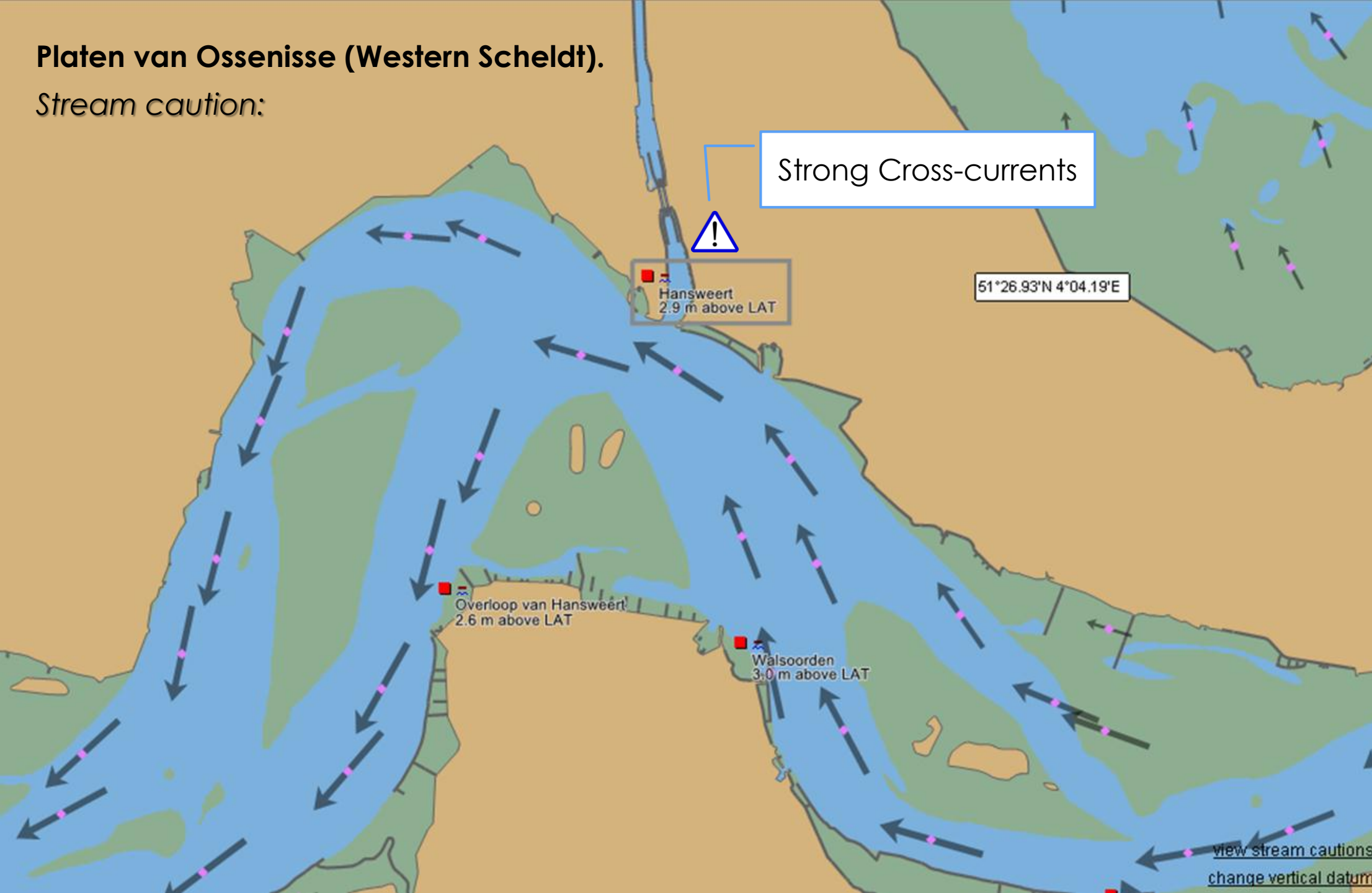


location ✓  
date/time ✓  
tidal data ✓



## Platen van Ossenisse (Western Scheldt).

Stream caution:



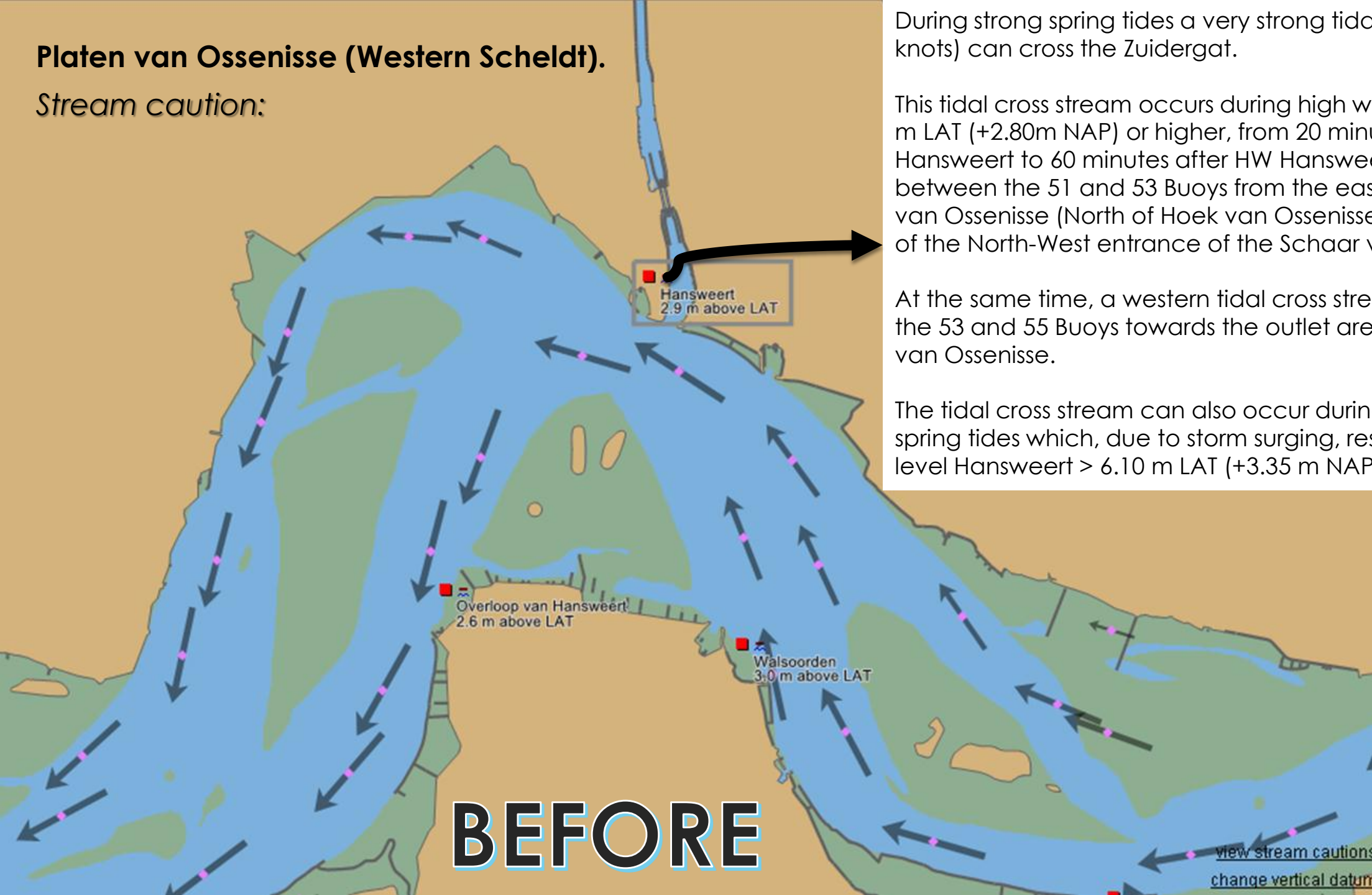
location ✓  
date/time ✓  
tidal data ✓





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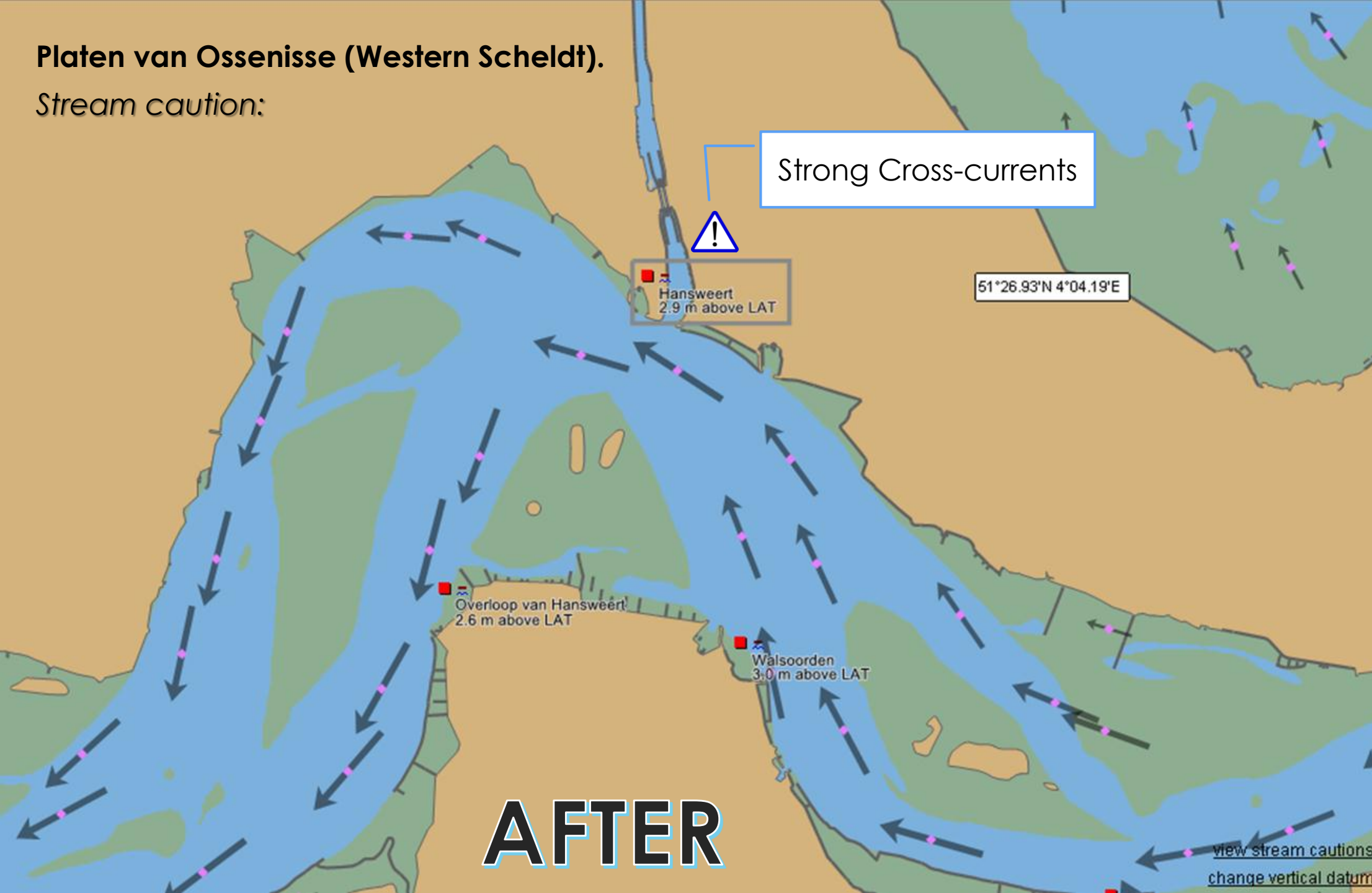
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The tidal cross stream can also occur during less developed spring tides which, due to storm surging, result in a water level Hansweert > 6.10 m LAT (+3.35 m NAP).

# BEFORE

## Platen van Ossenisse (Western Scheldt).

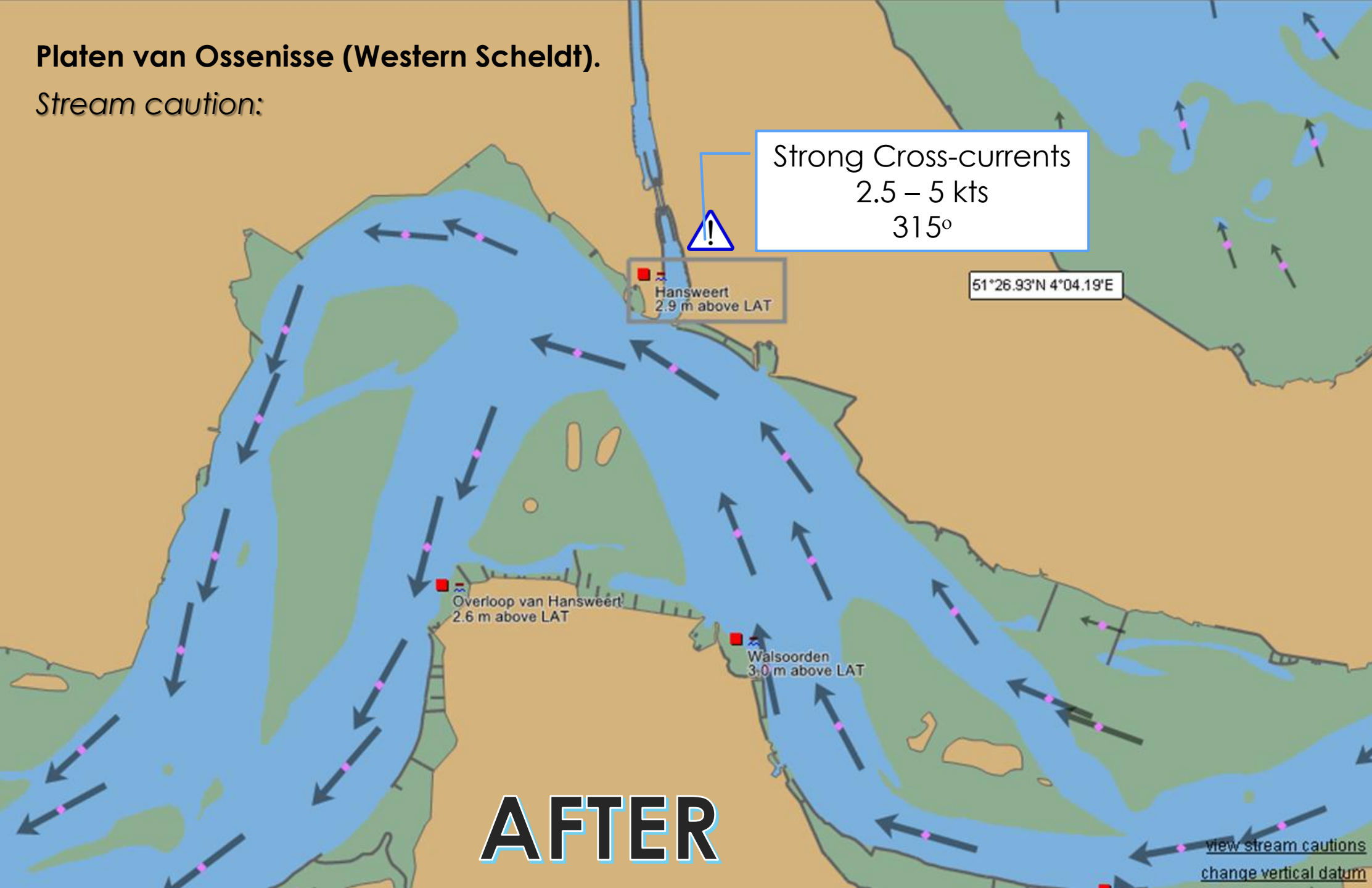
*Stream caution:*





## Platen van Ossenisse (Western Scheldt).

*Stream caution:*





# Thank you

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UNH CCOM/JHC

5/22/17 – Visualization of Nautical Information Workshop