

Press Kit - 2026



# STUDY ON THE PRESENCE OF PFAS IN BATHING AND RECREATIONAL WATERS

## IMPORTANT NOTE TO THE EDITORS

"The data presented in this report are based on citizen-led sampling campaigns carried out in accordance with a clearly defined protocol, and on analyses conducted in an accredited laboratory in accordance with current standards. The findings and conclusions of the report are the sole responsibility of the authors and Surfrider Foundation Europe. These conclusions may change in line with scientific advances, improved understanding of PFAS and developments in regulatory frameworks."



Surfrider Foundation Europe is an environmental NGO that has been working on the ground and with institutions for over 35 years to protect the Ocean. Our commitment is centred on three priorities: tackling plastic pollution at source, taking action to ensure a healthy aquatic environment, and preserving coastlines in the face of the challenges posed by climate change.

Our scientific expertise, combined with strong public engagement through our citizen science initiatives, enables us to produce independent data that informs our policy advocacy towards local, national and European institutions, with a view to bringing about changes to the legislative framework.

As water-based recreational activities are becoming increasingly popular in France and across Europe, Surfrider monitors the situation and works on a daily basis to push for more ambitious legislation on the quality of our aquatic environments, to ensure healthy waters for everyone.

Water pollution – whether chemical, bacteriological or biological – is an often invisible and widely underestimated phenomenon. It can affect the entire water cycle, having a direct impact not only on aquatic ecosystems (flora and fauna) but also on the health of those taking part in water sports and/or swimmers.

In this context, and in response to the growing concerns of our community, Surfrider Europe has launched a nationwide sampling campaign in France, aimed at improving our understanding of the presence of PFAS in aquatic environments.

# TABLE OF CONTENTS

|    |   |      |
|----|---|------|
| 01 | <u>Introduction</u>   | P.5  |
| 02 | <u>Methodology</u>  | P.6  |
| 03 | <u>Study results</u>  | P.8  |
|    | 01 <u>Chemical status of the areas tested</u>   | P.9  |
|    | 02 <u>A wide variety of PFAS</u>  | P.13 |
|    | 03 <u>The levels of chemical contamination of bathing and recreational waters</u>         | P.16 |
| 04 | <u>3 questions for Lucille Labayle</u>  | P.20 |
| 05 | <u>Appendix</u>   | P.22 |
|    | 01 <u>Chemical status of the areas tested's data tables</u>                               | P.22 |
|    | 02 <u>A wide variety of PFAS' Data tables</u>   | P.27 |
|    | 03 <u>Levels of chemical contamination of bathing and recreational water' data tables</u> | P.32 |

# INTRODUCTION

As the quality of aquatic environments continues to deteriorate, PFAS – a family of several thousand synthetic chemical compounds that are particularly mobile and persistent – are among the most worrying emerging contaminants. Due to their extreme persistence in the environment and their wide range of industrial uses, these ‘forever chemicals’ are widely dispersed in water, soil and air. The available scientific data, together with alerts raised by both public authorities and civil society, highlight widespread environmental contamination and growing health risks, stemming from multiple routes of exposure (ingestion, inhalation or skin contact).

Recent studies carried out in Europe have confirmed the widespread presence of PFAS in soil, air, food or drinking water. However, knowledge regarding their presence in bathing waters and recreational areas has, until now, remained limited. The ubiquity and persistence of these pollutants therefore raise numerous questions regarding the risks of exposure for bathers and water sports users.

This is why Surfrider Foundation Europe and Eurofins Hydrologie France partnered to assess the presence of PFAS in bathing waters, on the coast in lakes and rivers.

# METHODOLOGY

## **From site identification to sample analysis, and sampling campaigns: a supervised, participatory and collaborative methodology**

To improve our understanding of the presence of PFAS in aquatic environments, and more specifically in areas used for swimming and water sports, Surfrider drew on 80 volunteers of its network, present on the field. A total of 107 samples were taken between June and July 2025 at 80 coastal sites and 27 lake and river sites in France (mainland and overseas territories).

The sites were selected by cross-referencing several parameters: existing data on PFAS in surface waters (drawn from the European [Forever Pollution Project](#) investigation), the presence of [local Surfrider volunteer groups](#) across the country, and official bathing sites and areas of high recreational importance ([sites officially designated as such by the French Ministry of Health](#), supplemented by sites where such practices are reported by our volunteers in the field, which are not monitored as they are not included on the official list).

The samplers, who had received prior training in sampling techniques, followed a standardised protocol based on the recommendations of the Eurofins laboratory to ensure compliance with sampling conditions. The samples were sent to the Eurofins Food and Feed Testing Sweden AB laboratory for analysis.

In total, 58 PFAS and derivatives were analysed at 107 sites, representing a dataset of over 6,200 results.

## Map of sampling points for the 2025 campaign - PFAS Project



### Legend :

- ▲ Freshwater sampling points
  - Saltwater sampling points
  - Borders of metropolitan France
- Map background : OpenStreetMap



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MAP OF THE 107 SAMPLING POINTS FOR THE 2025 PFAS CAMPAIGN CARRIED OUT BY SURFRIDER



# STUDY RESULTS



# CHEMICAL STATUS OF THE TESTED AREAS

## Exceedances of PFOS concentration limits raise wider concerns about the chemical status of our recreational waters

Chemical pollution of aquatic environments places significant pressure on ecosystems, due to the diversity and toxicity of the substances emitted into the water. Environmental quality standards (EQS) are set out in European legislation aimed at halting the deterioration of the condition of water bodies in the EU: the Water Framework Directive (Directive 2000/60/EC). These standards enable the chemical quality (good or poor) of coastal and inland waters to be assessed.

At the time of our study and analyses, **PFOS** was still the only indicator substance covered by the WFD that belonged to the PFAS family (an update to the list of priority substances for surface water and groundwater, adopted earlier this year, has since expanded this list to include 25 specific PFAS)

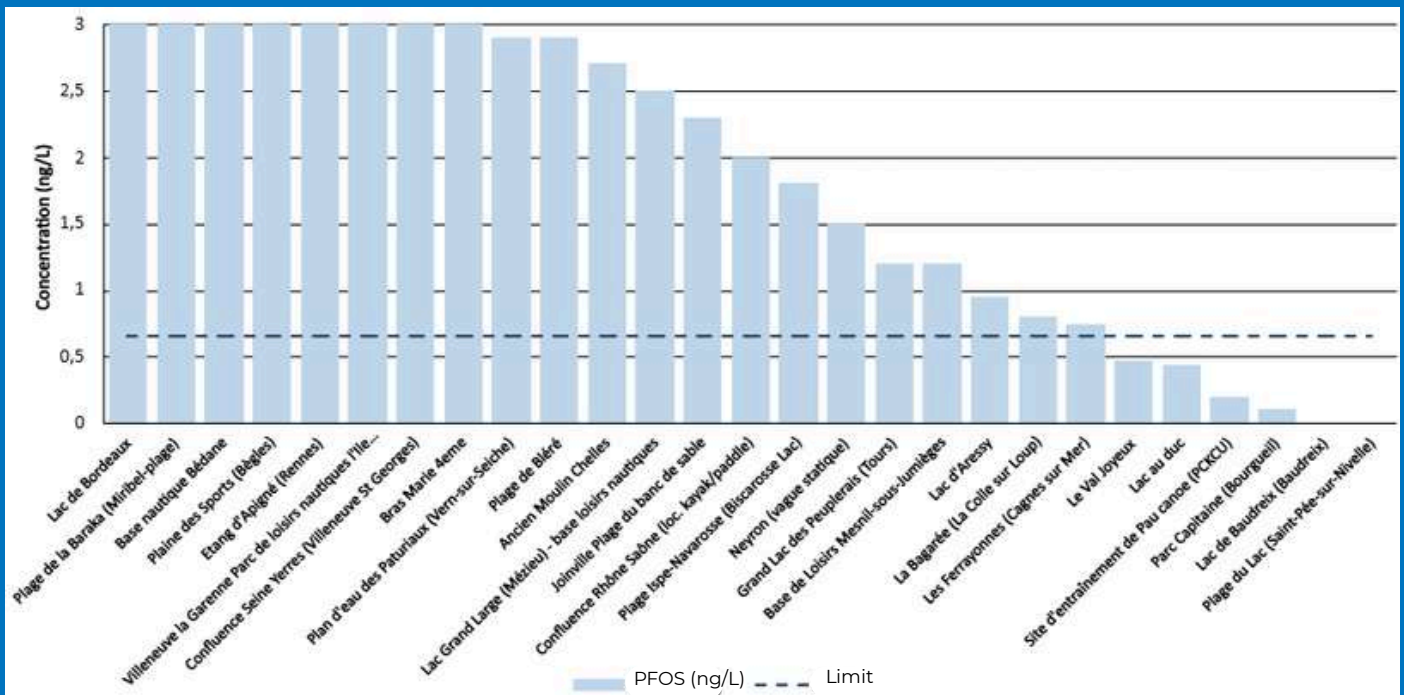
**This chemical pollutant was detected in most of our samples** – 62% of the sites analysed – despite restrictions at European (REACH) and international (Stockholm Convention) levels. It remains the **third most frequently observed PFAS in the samples, behind TFA and PFOA**. The PFOS concentrations measured in inland and coastal waters from our sampling campaigns range from 0.1 ng.L<sup>-1</sup> (LD) to 26 ng.L<sup>-1</sup>.

**The maximum permitted levels for PFOS set out by the WFD (0.65 ng.L<sup>-1</sup> for marine waters and 0.13 ng.L<sup>-1</sup> for inland waters) were exceeded at 78% of the inland sites and 44% of the coastal sites tested.** A significant number of the sites tested are therefore subject to pressure from PFOS pollution and could **be considered to be in “poor chemical status” according to the European standards taken into account in our study.**

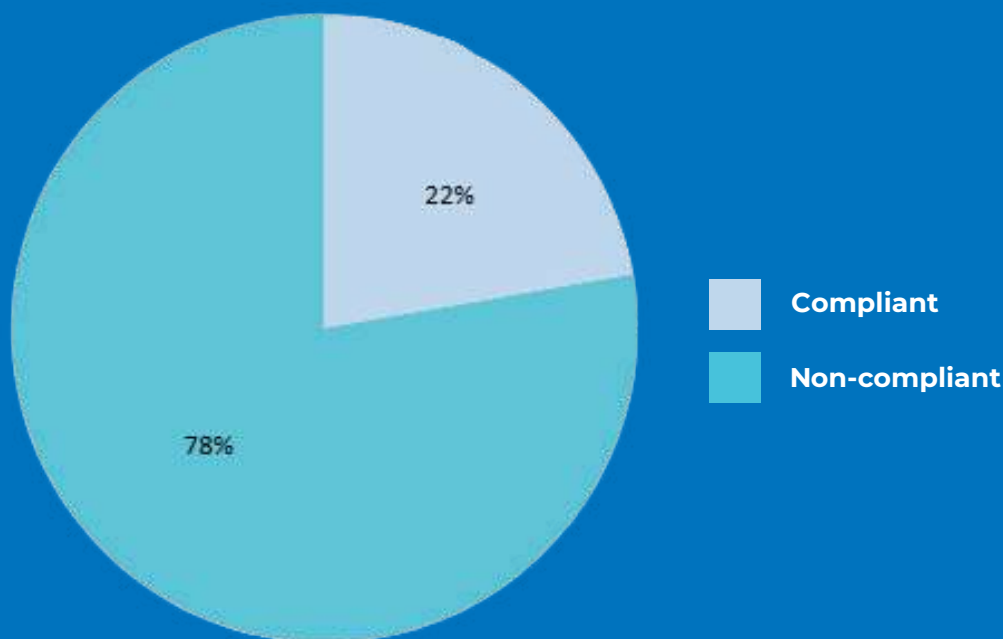
### Conclusions

PFOS and PFOA are two well-known substances that have been subject to bans for several years. Yet they are still among the most frequently identified PFAS in our samples, and at high concentrations. These results highlight the irreversible effects of these chemical pollutants and the need for swift and comprehensive action.

It is no coincidence that PFAS are described as ‘forever pollutants’: their persistence in the environment means that the effects of reduction measures will only become apparent in the long term. **The longer action is delayed, the more deeply entrenched the contamination becomes; it is therefore essential to act now.**



## PFOS PRESENCE IN FRESHWATER : A CLOSER LOOK AT THE THRESHOLD SET BY THE WFD (0.65 NG/L)



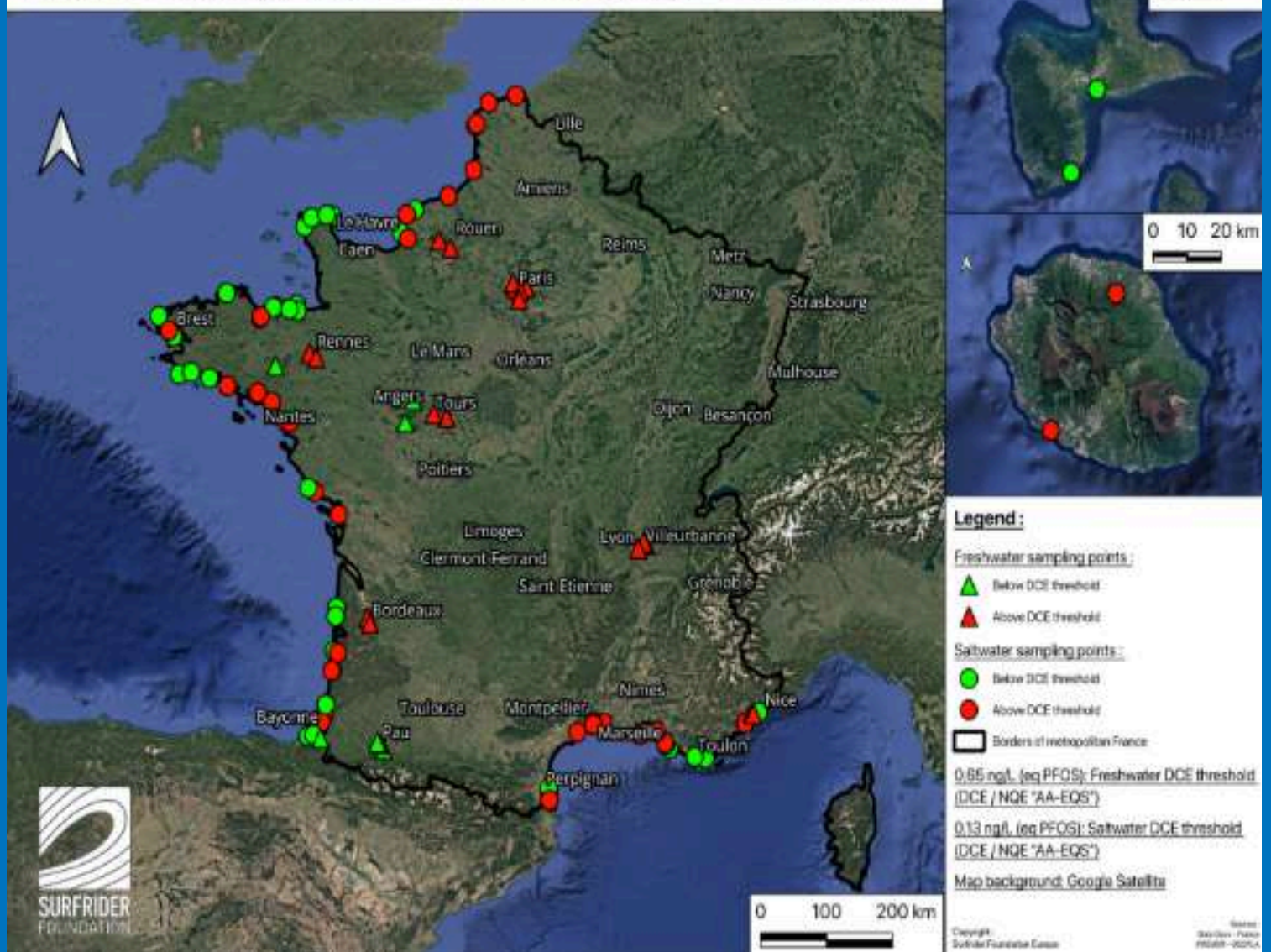
## COMPLIANCE OF PFOS LEVELS WITH THE WFD THRESHOLD IN 27 FRESHWATER SITES

**Key to understanding:** The concentration measured at each site is compared with the environmental quality standard (EQS) set by the Water Framework Directive (WFD) in force at the time the study was carried out. This standard distinguishes between two situations depending on the environment: 0.65 ng/L for inland waters and 0.13 ng/L for coastal waters. PFOS is classified here as a priority hazardous substance, reflecting the high level of concern it raises. A site is classified as non-compliant (poor chemical status) when its concentration exceeds the threshold applicable to its situation. Are presented : a histogram centred on the lower values, excluding insignificant values, so as to make the threshold line clearly visible; and a pie chart summarising the proportion of non-compliant sites.

Since then, the list of priority substances for surface and groundwater under the WFD was updated and formally adopted in March 2026. It extends the list of priority substances to new pollutants, with corresponding EQS, including the sum of 25 PFAS.



## Map of sampling points for the 2025 campaign - PFAS Project



MAP OF THE CHEMICAL STATUS OF THE 107 SAMPLING SITES STUDIED DURING THE 2025 PFAS CAMPAIGN CARRIED OUT BY SURFRIDER

## A WIDE DIVERSITY OF PFAS

**A variety of PFAS and degradation products has been detected. One of these molecules, TFA, is ubiquitous in aquatic environments.**

Developed for their specific characteristics and properties, PFAS are used in a wide range industrial sectors and consumer products. This large variety makes their identification, environmental monitoring and the assessment of their health effects particularly complex. Furthermore, the ban on certain compounds of concern or toxic has prompted the industrial sector to develop numerous substitute products, which are now found in the environment and are proving to be just as toxic.

As part of the study, **58 different molecules and degradation products were subjected to were thoroughly analysed** to quantify them in accordance with standardised analytical methods. **The contamination observed is very diverse. Up to 19 different molecules have been observed at the same site.** In total, **23 PFAS were quantified across all sites.**

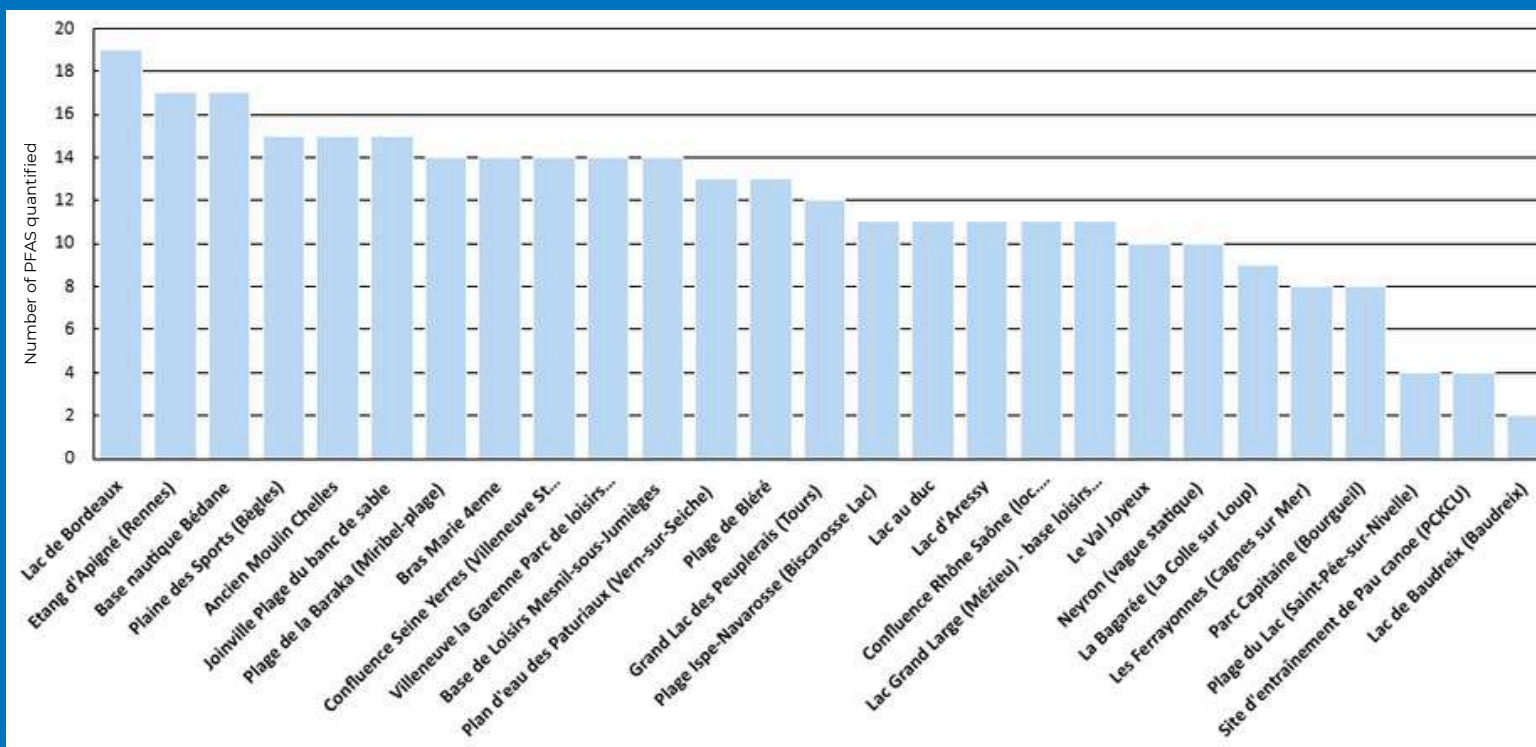
The example of **TFA** is a striking. It was **found in 100% of samples at very high concentrations compared with other PFAS. It regularly exceeded 1,000 ng.L<sup>-1</sup> with an average of 707 ng.L<sup>-1</sup>. Concentrations ranged from 180 ng.L<sup>-1</sup> (coastal site) to 5,800 ng.L<sup>-1</sup> (continental site).**

### Conclusions

The **detection of around twenty PFAS and their degradation products in the areas sampled highlights the limitations of the current regulatory framework.** The results confirm that a legislation based on substance-by-substance approach is not sufficient to effectively address the scale of this pollution, its extent and impacts of which are still being uncovered.

In light of recent news regarding the [ECHA's new classification of TFA as toxic to reproduction \(category 1B\)](#), its widespread presence across all our samples provides further evidence of the concerns surrounding this compound, as well as a proof of the need to take action as soon as possible.

Finally, whilst several recent reports have highlighted the presence of PFAS in drinking water, soil and food, our coastal samples provide a further insight to the extent of this chemical pollution. **The marine environment is still too often overlooked. Yet it, too, is heavily contaminated by PFAS at concentrations that were previously unsuspected.**

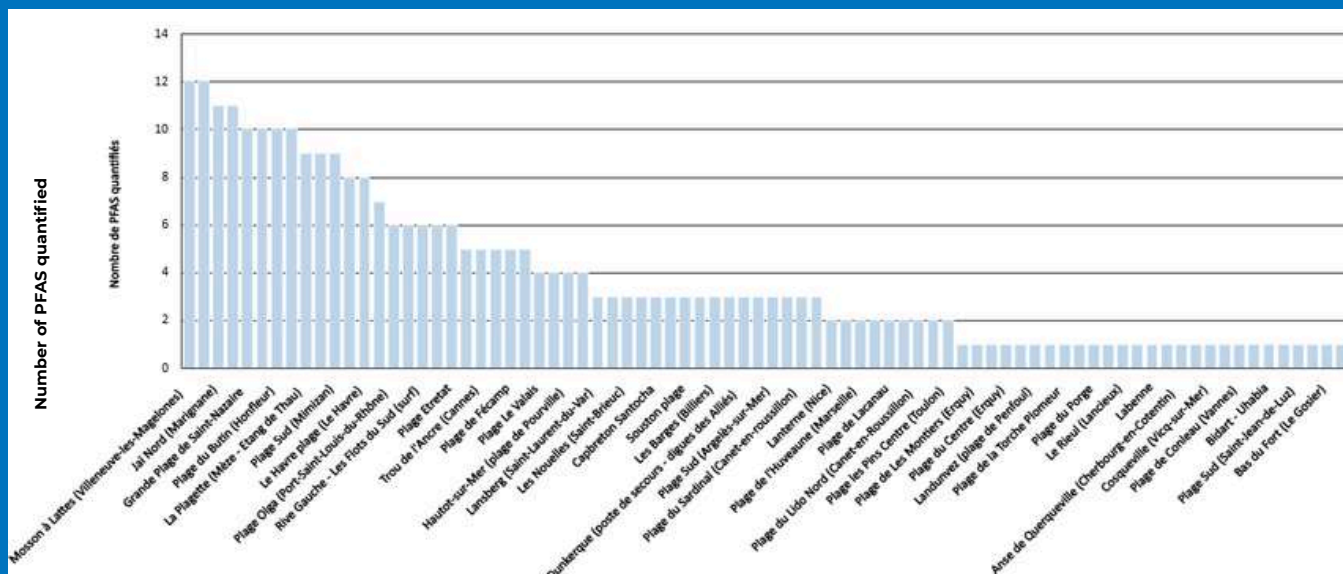


## NUMBER OF PFAS QUANTIFIED PER FRESHWATER SITE

| Rank | PFAS  | Sites number | Frequency |
|------|-------|--------------|-----------|
| 1    | TFA   | 27           | 100,00%   |
| 2    | PFOS  | 25           | 92,60%    |
| 3    | PFOA  | 25           | 92,60%    |
| 4    | PFHxS | 25           | 92,60%    |
| 5    | PFHxA | 24           | 88,90%    |

## RANKING OF THE MOST COMMONLY FOUND PFAS ON FRESHWATER SITES

**Key to understanding:** For each site, the number of PFAS detected at a concentration above the laboratory's limit of quantification is recorded. The analytical panel covers all the PFAS analysed by the Eurofins laboratory. The rankings presented above identify the substances detected at the greatest number of sites, indicating the corresponding frequency, i.e. the proportion of sites concerned.



## NUMBER OF PFAS QUANTIFIED PER COASTAL WATER SITE

| Rank | PFAS  | Sites number | Frequency |
|------|-------|--------------|-----------|
| 1    | TFA   | 80           | 100,00%   |
| 2    | PFOA  | 51           | 63,80%    |
| 3    | PFOS  | 41           | 51,20%    |
| 4    | PFHxS | 26           | 32,50%    |
| 5    | PFHxA | 22           | 27,50%    |

## RANKING OF THE MOST COMMONLY FOUND PFAS ON COSTAL WATER SITES

| Rank | PFAS  | Sites number | Frequency |
|------|-------|--------------|-----------|
| 1    | TFA   | 107          | 100,00%   |
| 2    | PFOA  | 76           | 71,00%    |
| 3    | PFOS  | 66           | 61,70%    |
| 4    | PFHxS | 51           | 47,70%    |
| 5    | PFHxA | 46           | 43,00%    |

## RANKING OF THE MOST COMMONLY FOUND PFAS ON EVERY STUDIED SITES

**Key to understanding:** For each site, the number of PFAS detected at a concentration above the laboratory's limit of quantification is recorded. The analytical panel covers all the PFAS analysed by the Eurofins laboratory. The rankings presented above identify the substances detected at the greatest number of sites, indicating the corresponding frequency, i.e. the proportion of sites concerned.

# LEVELS OF CHEMICAL CONTAMINATION IN BATHING AND RECREATIONAL WATERS

## PFAS in bathing waters: widely detected presence

PFAS may pose a potential risk to people exposed to contaminated water. In recent years in the Netherlands, PFAS contamination has led the authorities to introduce specific management measures, including restrictions (bans or advisories) on swimming and recreational activities. In response to growing concerns about the presence of PFAS in recreational water bodies, the Dutch National Institute for Public Health and the Environment (RIVM) has developed a tool to support the management bathing water quality based on indicative recommended values. **For coastal and freshwater bodies, the guideline value adopted is 280 ng PEQ.L<sup>-1</sup>.**

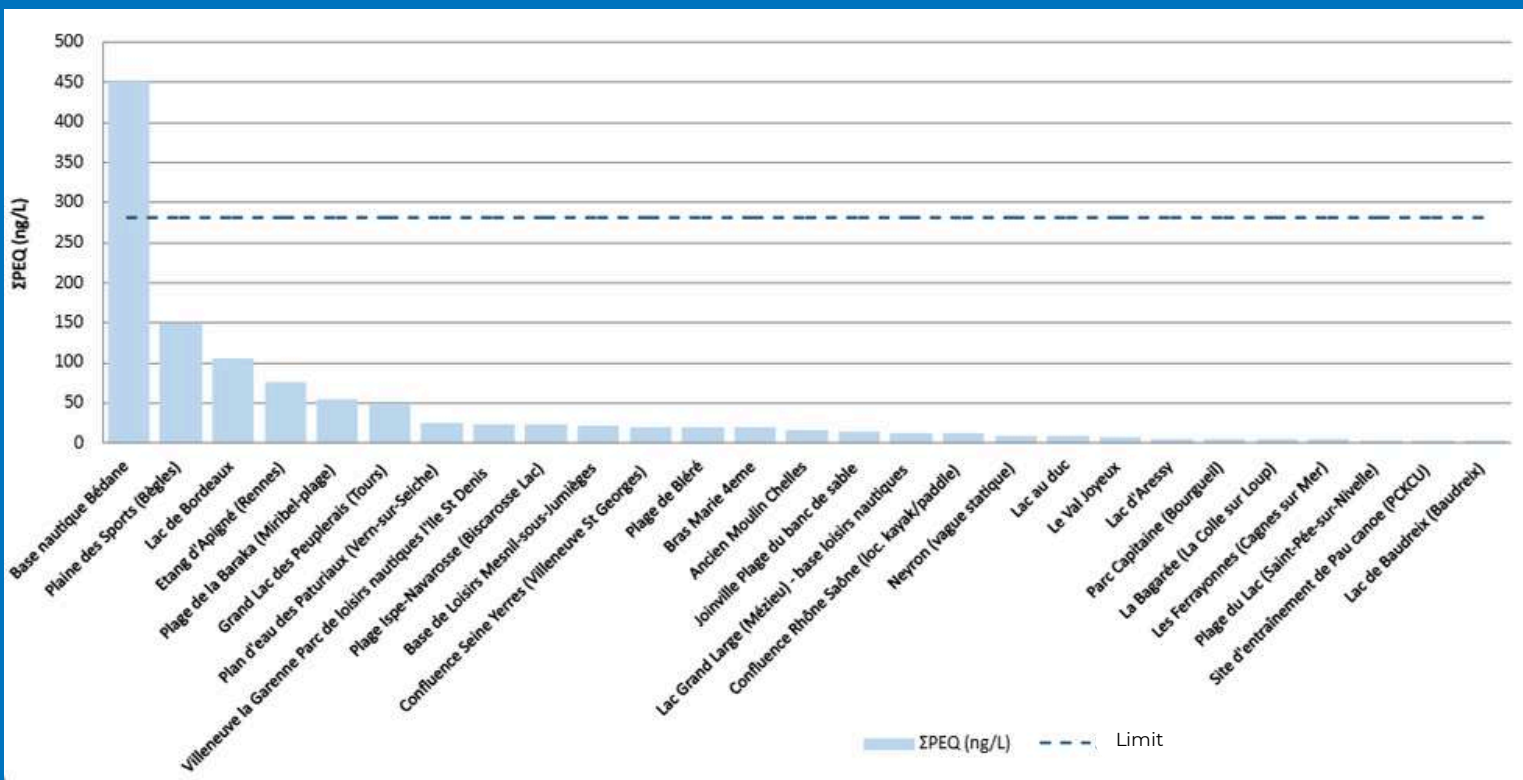
Applying these Dutch assessment standards to French bathing sites has yielded unequivocal results. **All sites present values higher than 0, with concentrations at coastal sites ranging from 0.36 to 18.9 ng PEQ.L<sup>-1</sup> and from 0.74 to 450 ng PEQ.L<sup>-1</sup> at inland sites.**

In total, **21 sites have concentrations ranging from 10 to 105 ng PEQ.L<sup>-1</sup>, 80% of which are inland sites.** Of all the samples taken, one site, located on a lake , significantly exceeds the guideline value set by the Dutch authorities.

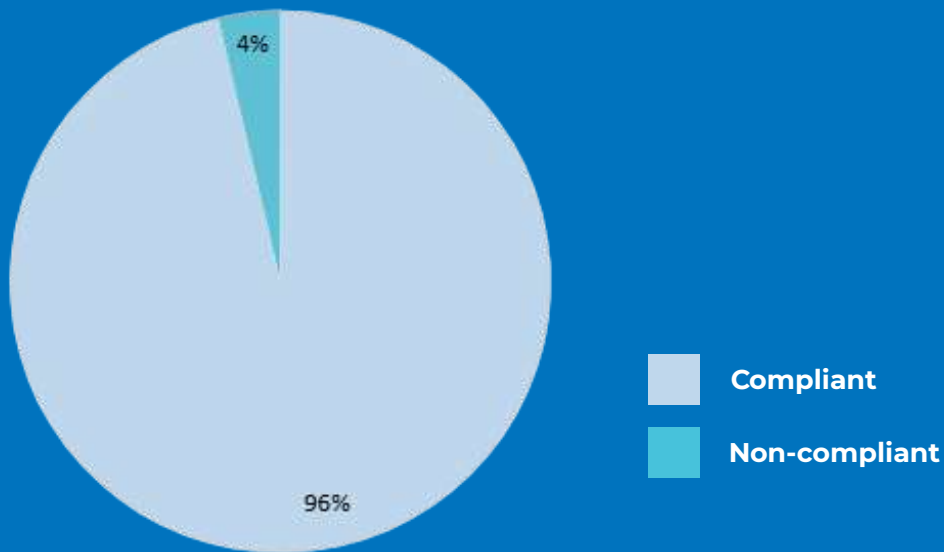
### Conclusions

**PFAS were detected at all the sites studied**, with varying levels of contamination. One site would even exceed the Dutch authorities' recommendations if French bathing waters were governed by a similar framework.

Despite these findings, **there is currently no harmonised framework for the monitoring or management of PFAS in bathing waters at European level.** This study highlights the value of complementing existing health monitoring schemes with **targeted PFAS analyses in order to better characterise chemical pollution in different regions and to guide appropriate management measures.** Such monitoring must be based on harmonised standards and protocols at European level in order to provide the best possible support to the authorities managing these bathing and recreational sites.

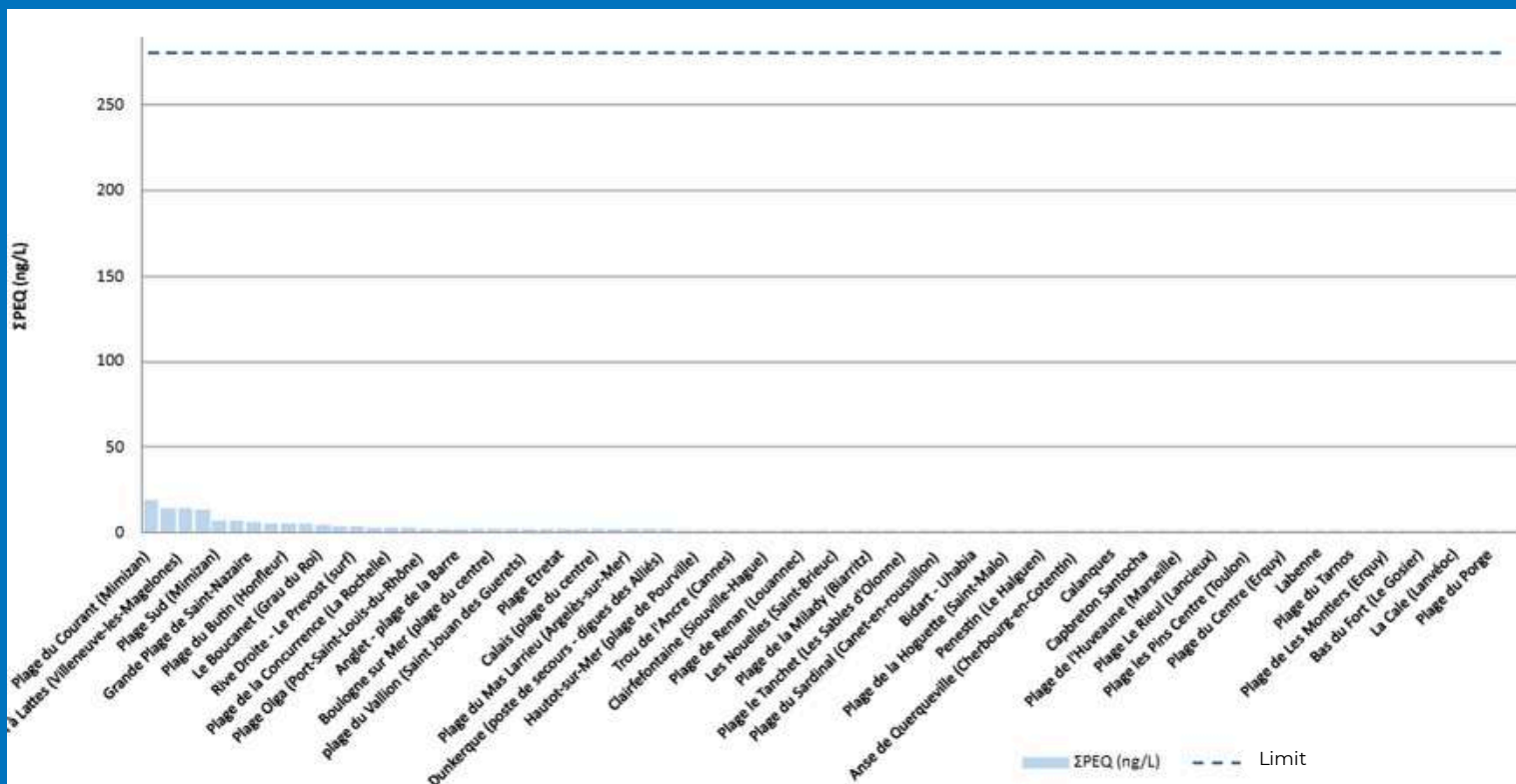


## CUMULATIVE TOXIC EQUIVALENT COEFFICIENT FOR PFAS ON FRESHWATER SITES



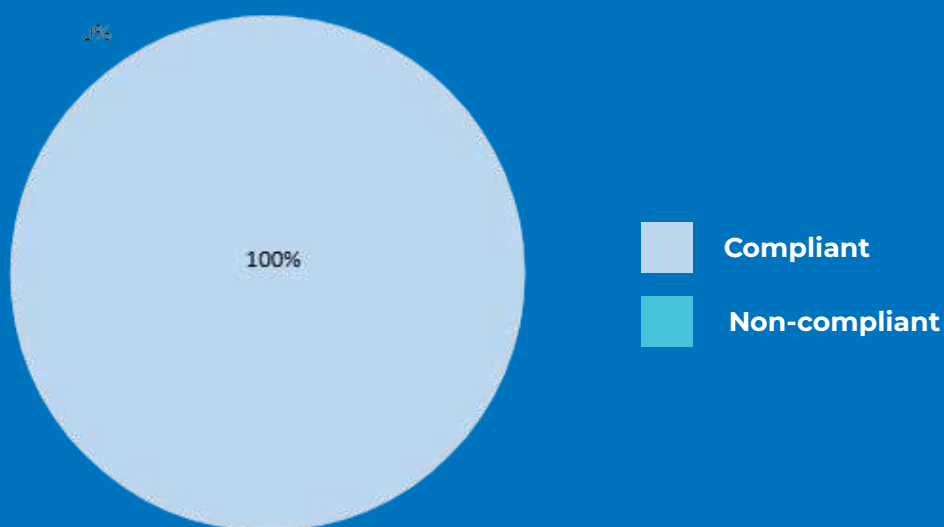
## COMPLIANCE OF FRESHWATER SITES WITH THE CONCENTRATION THRESHOLDS SET BY THE RIVM

**Key to understanding:** For each sample, the concentration of each of the 26 PFAS studied is multiplied by its relative potency factor (RPF), a coefficient that expresses its toxicity relative to a reference molecule, PFOA, as established by the RIVM. The sum of these products provides a cumulative toxic equivalent, known as  $\Sigma$ PEQ and expressed in ng PFOA-equivalent per litre, which is then compared with the threshold of 280 ng/L applicable to surface waters. The corresponding histograms are presented on a full scale, up to the threshold of 280 ng/L, and the sites are ranked in descending order of value. The proposed guideline values address growing health concerns linked to recreational activities by providing a method for assessing bathing water quality.



## CUMULATIVE TOXIC EQUIVALENT COEFFICIENT FOR PFAS ON COASTAL WATER

### SITES

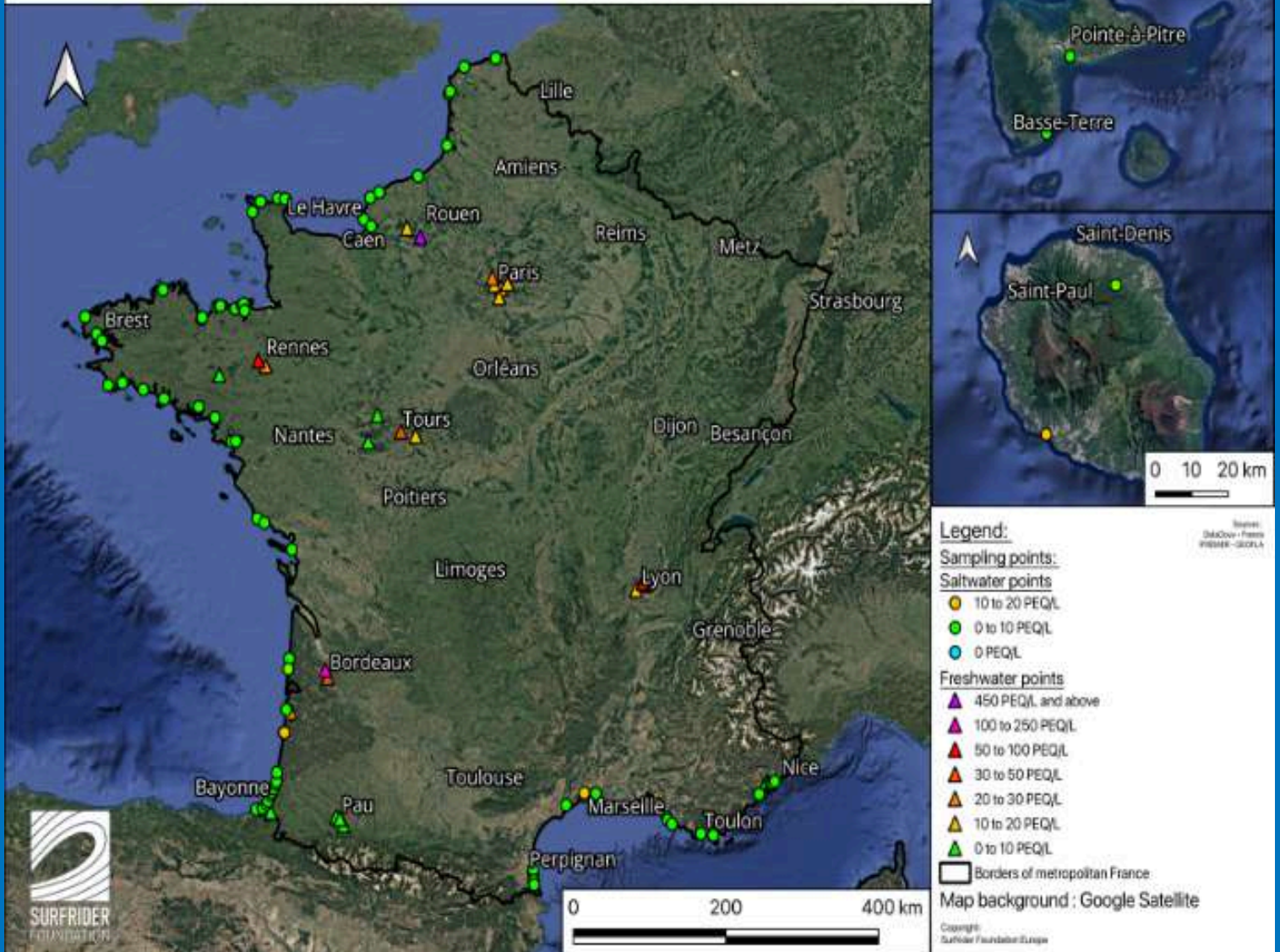


## COMPLIANCE OF COASTAL WATER SITES WITH THE CONCENTRATION

### THRESHOLDS SET BY THE RIVM

**Key to understanding:** For each sample, the concentration of each of the 26 PFAS studied is multiplied by its relative potency factor (RPF), a coefficient that expresses its toxicity relative to a reference molecule, PFOA, as established by the RIVM. The sum of these products provides a cumulative toxic equivalent, known as  $\Sigma$ PEQ and expressed in ng PFOA-equivalent per litre, which is then compared with the threshold of 280 ng/L applicable to surface waters. The corresponding histograms are presented on a full scale, up to the threshold of 280 ng/L, and the sites are ranked in descending order of value. The proposed guideline values address growing health concerns linked to recreational activities by providing a method for assessing bathing water quality.

## Sampling points with the RIVM's method - PFAS Project



MAP OF THE STATUS OF THE BATHING SITES SURVEYED, BASED ON THEIR CUMULATIVE TOXIC EQUIVALENT CONCENTRATION OF PFAS (CALCULATED USING THE RIVM METHOD)

# 3 QUESTIONS FOR LUCILLE LABAYLE, WATER QUALITY AND HEALTH POLICY OFFICER

## Why was this study carried out?

PFAS pollution is a major health and environmental issue for our societies. Whilst awareness of these 'forever chemicals' is gradually growing, their presence in bathing and recreational waters across Europe remains largely unknown. This is why Surfrider has decided to carry out a study aimed at improving our understanding of the presence of PFAS in aquatic environments.

## What lessons have you learnt from this?

Assessing the presence of PFAS in bathing and recreational waters sheds new light on this chemical pollution and provides further evidence of its scale and severity. The health of the Ocean and its users must no longer be overlooked. Our findings unanimously indicate that the only viable solution for the long-term protection of our health and that of ecosystems is prevention at source.

## What measures are needed to prevent PFAS pollution?

The findings of this study are eye-opening. By publishing this data, we aim to draw the attention of decision-makers to the urgent need to take action rapidly. More specifically:

- Take up the conclusions of ECHA by the end of the year in order to **adopt a universal restriction of PFAS as soon as possible, covering all sectors and uses, including industrial sectors**. We also call on Member States to support this ambition, so as to put a permanent stop to this pollution at source.
- **Strengthen the networks for monitoring water quality, particularly in the marine environment**; this must be accompanied by concrete actions such as the identification of sources of pollution, remediation of contaminated sites and effective implementation of the polluter-pay principle.
- **Establish harmonized PFAS monitoring protocols for bathing and recreational water in the Member States**, accompanied by complementary studies aimed at addressing the lack of data on pollution in these areas, and ultimately enabling the establishment of official European monitoring standards for the chemical quality of bathing waters. When pollution is confirmed, the European Commission and the Member States must develop plans for water remediation, while applying the "polluter pays" principle.



## PRACTICAL INFORMATION

- Full report on the study will be published during the summer of 2026
- [Manifesto for bathing and recreational waters quality in Europe](#)

[Link to relevant photos and videos](#)

## PRESS CONTACT

Lionel Cheylus | Medias Relation Manager  
+33 6 08 10 58 02  
[lcheyus@surfrider.eu](mailto:lcheyus@surfrider.eu)



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## CHEMICAL STATUS OF THE FRESHWATER SITES STUDIED

| N° dépt | Departement     | Site   | PFOS (ng/L) | Compliance    |
|---------|-----------------|--|-------------|---------------|
| 6       | Alpes-Maritimes | La Bagarée (La Colle sur Loup)                                 | 0,8         | Non compliant |
| 6       | Alpes-Maritimes | Les Ferrayonnes (Cagnes sur Mer)                               | 0,74        | Non compliant |
| 33      | Gironde         | Lac de Bordeaux  | 26          | Non compliant |
| 33      | Gironde         | Plaine des Sports (Bègles)                                     | 10          | Non compliant |
| 35      | Ille-et-Vilaine | Etang d'Apigné (Rennes)  | 5,9         | Non compliant |
| 35      | Ille-et-Vilaine | Plan d'eau des Paturiaux (Vern-sur-Seiche)                     | 2,9         | Non compliant |
| 37      | Indre-et-Loire  | Grand Lac des Peuplerais (Tours)                               | 1,2         | Non compliant |
| 37      | Indre-et-Loire  | Lac du Val Joyeux (Château-la-Vallière)                        | 0,47        | Compliant     |
| 37      | Indre-et-Loire  | Parc Capitaine (Bourgueil)                                     | 0,11        | Compliant     |
| 37      | Indre-et-Loire  | Plage de Bléré   | 2,9         | Non compliant |
| 40      | Landes          | Plage Ispe-Navarosse (Biscarosse Lac)                          | 1,8         | Non compliant |
| 56      | Morbihan        | Lac au duc (Ploërmel)  | 0,44        | Compliant     |
| 64      | Béarn           | Lac d'Aressy   | 0,95        | Non compliant |
| 64      | Béarn           | Lac de Baudreix  | <0,10       | Compliant     |
| 64      | Côte Basque     | Plage du Lac (Saint-Pée-sur-Nivelle)                           | <0,10       | Compliant     |
| 64      | Béarn           | Site d'entraînement de Pau canoe (PCKCU)                       | 0,2         | Compliant     |
| 69      | Rhône           | Confluence Rhône Saône (loc. kayak/paddle) (Lyon)              | 2           | Non compliant |
| 69      | Rhône           | Base nautique municipale Meyzieu Grand Large                   | 2,5         | Non compliant |
| 69      | Rhône           | Neyron (vague statique)  | 1,5         | Non compliant |
| 69      | Rhône           | Plage de la Baraka (Lac de Miribel plage à Neyron)             | 13          | Non compliant |
| 75      | Paris           | Bras Marie 4eme  | 3,3         | Non compliant |
| 76      | Seine-Maritime  | Base de Loisirs Mesnil-sous-Jumièges                           | 1,2         | Non compliant |
| 76      | Seine-Maritime  | Base nautique Bédane   | 12          | Non compliant |
| 77      | Seine-et-Marne  | Ancien Moulin de Chelles                                       | 2,7         | Non compliant |
| 92      | Hauts-de-Seine  | Villeneuve la Garenne Parc de loisirs nautiques l'Île St Denis | 4,8         | Non compliant |
| 94      | Val-de-Marne    | Confluence Seine Yerres (Villeneuve St Georges)                | 3,9         | Non compliant |
| 94      | Val-de-Marne    | Joinville Plage du banc de sable                               | 2,3         | Non compliant |

## CHEMICAL STATUS OF THE SITES STUDIED IN COASTAL WATERS

| N° dept   | Departement              | Site  | PFOS (ng/L) | Compliance           |
|-----------|--------------------------|---|-------------|----------------------|
| 6         | Alpes-Maritimes          | Plage de Landsberg (Saint-Laurent-du-Var)     | <0,20       | Compliant            |
| 6         | Alpes-Maritimes          | Plage de la Lanterne (Nice)                   | <0,10       | Compliant            |
| <b>6</b>  | <b>Alpes-Maritimes</b>   | <b>Plage Mogador (Cagnes sur Mer)</b>         | <b>0,26</b> | <b>Non compliant</b> |
| <b>6</b>  | <b>Alpes-Maritimes</b>   | <b>Trou de l'Ancre (Cannes)</b>               | <b>0,19</b> | <b>Non compliant</b> |
| 13        | Bouches-du-Rhône         | Calanque de Morgiou (Marseille)               | <0,10       | Compliant            |
| <b>13</b> | <b>Bouches-du-Rhône</b>  | <b>Jaï Nord (Marignane)</b>                   | <b>2,7</b>  | <b>Non compliant</b> |
| <b>13</b> | <b>Bouches-du-Rhône</b>  | <b>Plage Cavaou (Fos-sur-Mer)</b>             | <b>0,61</b> | <b>Non compliant</b> |
| <b>13</b> | <b>Bouches-du-Rhône</b>  | <b>Plage Olga (Port-Saint-Louis-du-Rhône)</b> | <b>0,44</b> | <b>Non compliant</b> |
| 13        | Bouches-du-Rhône         | Plage de l'Huveaune (Marseille)               | <0,10       | Compliant            |
| <b>13</b> | <b>Bouches-du-Rhône</b>  | <b>Plage des Catalans (Marseille)</b>         | <b>0,18</b> | <b>Non compliant</b> |
| <b>17</b> | <b>Charente-Maritime</b> | <b>Plage de la Concurrence (La Rochelle)</b>  | <b>0,35</b> | <b>Non compliant</b> |
| <b>22</b> | <b>Côtes-d'Armor</b>     | <b>Plage Les Nouelles (Plérin)</b>            | <b>0,14</b> | <b>Non compliant</b> |
| 22        | Côtes-d'Armor            | Plage Le Rieul Amont (Lancieux)               | <0,10       | Compliant            |
| 22        | Côtes-d'Armor            | Plage Le Rieul Aval (Lancieux)                | <0,10       | Compliant            |
| <b>22</b> | <b>Côtes-d'Armor</b>     | <b>Plage du Valais (Saint-Brieuc)</b>         | <b>0,42</b> | <b>Non compliant</b> |
| 22        | Côtes-d'Armor            | Plage des Montiers (Erquy)                    | <0,10       | Compliant            |
| 22        | Côtes-d'Armor            | Plage de Renan (Louannec)                     | 0,13        | Compliant            |
| 22        | Côtes-d'Armor            | Plage des Sables d'Or Les Pins (Fréhel)       | <0,10       | Compliant            |
| 22        | Côtes-d'Armor            | Plage du Centre (Erquy)                       | <0,10       | Compliant            |
| 29        | Finistère                | La Cale (Lanvéoc)                             | <0,10       | Compliant            |
| 29        | Finistère                | Plage de Penfoul (Landunvez)                  | <0,10       | Compliant            |
| 29        | Finistère                | Petite plage (Bénodet)                        | <0,10       | Compliant            |
| 29        | Finistère                | Plage de la Torche (Plomeur)                  | <0,10       | Compliant            |

## CHEMICAL STATUS OF THE SITES STUDIED IN COASTAL WATERS

| N° dept   | Departement             | Site  | PFOS (ng/L) | Compliance           |
|-----------|-------------------------|---|-------------|----------------------|
| 29        | Finistère               | Port Manec'h (Nevez)                                      | <0,10       | Compliant            |
| <b>29</b> | <b>Finistère</b>        | <b>Plage de Sainte-Anne-du-Portzic (Brest)</b>            | <b>0,16</b> | <b>Non compliant</b> |
| 33        | Gironde                 | Plage de Lacanau  | <0,10       | Compliant            |
| 33        | Gironde                 | Plage du Porge  | <0,10       | Compliant            |
| <b>34</b> | <b>Hérault</b>          | <b>La Plagette (Mèze - Etang de Thau)</b>                 | <b>0,61</b> | <b>Non compliant</b> |
| <b>34</b> | <b>Hérault</b>          | <b>Le Boucanet (Grau du Roi)</b>                          | <b>0,4</b>  | <b>Non compliant</b> |
| <b>34</b> | <b>Hérault</b>          | <b>Embouchure du Lez (Lattes)</b>                         | <b>1,8</b>  | <b>Non compliant</b> |
| <b>34</b> | <b>Hérault</b>          | <b>Plage de la Rive Droite (Palavas-Les-Flots) (surf)</b> | <b>0,41</b> | <b>Non compliant</b> |
| <b>34</b> | <b>Hérault</b>          | <b>Plage Rive Gauche (Palavas-Les-Flots) (surf)</b>       | <b>0,3</b>  | <b>Non compliant</b> |
| 35        | Ille-et-Vilaine         | Plage du Mole (Saint-Malo)                                | <0,10       | Compliant            |
| 35        | Ille-et-Vilaine         | Plage de la Hoguette (Saint-Malo)                         | <0,10       | Compliant            |
| 35        | Ille-et-Vilaine         | plage du Vallion (Saint Jouan des Guerets)                | <0,10       | Compliant            |
| 40        | Landes                  | Plage du Santocha (Capbreton)                             | <0,10       | Compliant            |
| 40        | Landes                  | Plage de Labenne  | <0,10       | Compliant            |
| <b>40</b> | <b>Landes</b>           | <b>Plage Sud (Mimizan)</b>                                | <b>1,4</b>  | <b>Non compliant</b> |
| <b>40</b> | <b>Landes</b>           | <b>Plage du Courant (Mimizan)</b>                         | <b>4,1</b>  | <b>Non compliant</b> |
| <b>40</b> | <b>Landes</b>           | <b>Plage du Rey (Soorts-Hossegor)</b>                     | <b>0,35</b> | <b>Non compliant</b> |
| 40        | Landes                  | Plage de Tarnos   | <0,40       | Compliant            |
| 40        | Landes                  | Plage du Vivier (Biscarosse Plage)                        | 0,13        | Compliant            |
| 40        | Landes                  | Plage de l'Océan (Souston)                                | <0,10       | Compliant            |
| <b>44</b> | <b>Loire-Atlantique</b> | <b>Grande Plage de Saint-Nazaire</b>                      | <b>1,4</b>  | <b>Non compliant</b> |
| <b>44</b> | <b>Loire-Atlantique</b> | <b>Plage des Poilus (Saint-Brévin-les-Pins)</b>           | <b>1,1</b>  | <b>Non compliant</b> |

## CHEMICAL STATUS OF THE SITES STUDIED IN COASTAL WATERS

| N° dept   | Departement                | Site   | PFOS (ng/L) | Compliance           |
|-----------|----------------------------|--|-------------|----------------------|
| 50        | Manche                     | Anse de Querqueville (Cherbourg-en-Cotentin)           | <0,10       | Compliant            |
| 50        | Manche                     | Anse de la Masse (Gatteville-le-Phare)                 | 0,13        | Compliant            |
| 50        | Manche                     | Plage Clairfontaine (Siouville-Hague)                  | <0,10       | Compliant            |
| 50        | Manche                     | Plage de Cosqueville (Vicq-sur-Mer)                    | <0,10       | Compliant            |
| <b>56</b> | <b>Morbihan</b>            | <b>Plage des Barges (Billiers)</b>                     | <b>0,62</b> | <b>Non compliant</b> |
| 56        | Morbihan                   | Le Halguen (Pénestin)                                  | <0,30       | Compliant            |
| 56        | Morbihan                   | Plage de Conleau (Vannes)                              | <0,30       | Compliant            |
| 56        | Morbihan                   | Thoulars (Larmor-Plage)                                | <0,30       | Compliant            |
| <b>59</b> | <b>Nord</b>                | <b>Plage du centre (Calais)</b>                        | <b>0,37</b> | <b>Non compliant</b> |
| <b>59</b> | <b>Nord</b>                | <b>Poste de secours - Digue des Alliés (Dunkerque)</b> | <b>0,26</b> | <b>Non compliant</b> |
| <b>62</b> | <b>Pas-de-Calais</b>       | <b>Plage du centre (Boulogne-sur-Mer)</b>              | <b>0,44</b> | <b>Non compliant</b> |
| <b>62</b> | <b>Pas-de-Calais</b>       | <b>Plage du centre (Le Portel)</b>                     | <b>0,26</b> | <b>Non compliant</b> |
| <b>64</b> | <b>Côte Basque</b>         | <b>Plage de la Barre (Anglet)</b>                      | <b>0,34</b> | <b>Non compliant</b> |
| 64        | Côte Basque                | Plage de l'Uhabia (Bidart)                             | <0,10       | Compliant            |
| 64        | Côte Basque                | Plage d'Hendaye  | <0,10       | Compliant            |
| 64        | Côte Basque                | Plage Sud (Saint-Jean-de-Luz)                          | <0,10       | Compliant            |
| 64        | Côte Basque                | Plage de la Milady (Biarritz)                          | <0,10       | Compliant            |
| <b>66</b> | <b>Pyrénées-Orientales</b> | <b>Plage Sud (Argelès-sur-Mer)</b>                     | <b>0,26</b> | <b>Non compliant</b> |
| 66        | Pyrénées-Orientales        | Plage du Lido Nord (Canet-en-Roussillon)               | <0,10       | Compliant            |
| <b>66</b> | <b>Pyrénées-Orientales</b> | <b>Plage du Mas Larrieu (Argelès-sur-Mer)</b>          | <b>0,33</b> | <b>Non compliant</b> |
| 66        | Pyrénées-Orientales        | Plage du Sardinal (Canet-en-roussillon)                | 0,1         | Compliant            |
| <b>76</b> | <b>Seine-Maritime</b>      | <b>Plage de Pourville (Hautot-sur-Mer)</b>             | <b>0,24</b> | <b>Non compliant</b> |

## CHEMICAL STATUS OF THE SITES STUDIED IN COASTAL WATERS

| N° dept    | Departement           | Site   | PFOS (ng/L) | Compliance           |
|------------|-----------------------|--|-------------|----------------------|
| 76         | Seine-Maritime        | Le Havre plage   | 0           | Compliant            |
| <b>76</b>  | <b>Seine-Maritime</b> | <b>Plage Etretat</b>                                     | <b>0,32</b> | <b>Non compliant</b> |
| 76         | Seine-Maritime        | Plage de Fécamp  | 0,11        | Compliant            |
| <b>76</b>  | <b>Seine-Maritime</b> | <b>Plage du Butin (Honfleur)</b>                         | <b>1</b>    | <b>Non compliant</b> |
| <b>80</b>  | <b>Somme</b>          | <b>Plage de Cayeux-sur-Mer</b>                           | <b>0,42</b> | <b>Non compliant</b> |
| 83         | Var                   | Plage Ceinturon est-L'Aygade (Hyères)                    | <0,10       | Compliant            |
| 83         | Var                   | Plage les Pins Centre (Toulon)                           | <0,10       | Compliant            |
| <b>85</b>  | <b>Vendée</b>         | <b>Plage des viviers de la mine (Talmont st Hilaire)</b> | <b>0,24</b> | <b>Non compliant</b> |
| 85         | Vendée                | Plage le Tanchet (Les Sables d'Olonne)                   | 0,12        | Compliant            |
| 971        | Guadeloupe            | Bas du Fort (Le Gosier)                                  | <0,10       | Compliant            |
| 971        | Guadeloupe            | Plage de Salée Bananier (Capesterre-Belle-Eau)           | <0,10       | Compliant            |
| <b>974</b> | <b>La Réunion</b>     | <b>L'étang du Gol (Etang Salé) (Saint-Louis)</b>         | <b>1,7</b>  | <b>Non compliant</b> |
| <b>974</b> | <b>La Réunion</b>     | <b>Rivière Sainte-Suzanne</b>                            | <b>0,16</b> | <b>Non compliant</b> |

**Key to understanding:** The concentration measured at each site is compared with the environmental quality standard (EQS) set by the Water Framework Directive (WFD) in force at the time the study was carried out. This standard distinguishes between two situations depending on the environment: 0.65 ng/L for inland waters and 0.13 ng/L for coastal waters. PFOS is classified here as a priority hazardous substance, reflecting the high level of concern it raises. A site is classified as non-compliant (poor chemical status) and highlighted in red in the table when its concentration exceeds the threshold applicable to its situation.

Since then, the list of priority substances for surface and groundwater under the WFD was updated and formally adopted in March 2026. It extends the list of priority substances to new pollutants, with corresponding EQS, including the sum of 25 PFAS.

## NUMBER OF PFAS QUANTIFIED BY FRESHWATER SITE

| N° dept | Departement     | Site   | Nb PFAS quantified |
|---------|-----------------|--|--------------------|
| 6       | Alpes-Maritimes | La Bagarée (La Colle sur Loup)                                 | 9                  |
| 6       | Alpes-Maritimes | Les Ferrayonnes (Cagnes sur Mer)                               | 8                  |
| 33      | Gironde         | Lac de Bordeaux  | 19                 |
| 33      | Gironde         | Plaine des Sports (Bègles)                                     | 15                 |
| 35      | Ille-et-Vilaine | Etang d'Apigné (Rennes)  | 17                 |
| 35      | Ille-et-Vilaine | Plan d'eau des Paturiaux (Vern-sur-Seiche)                     | 13                 |
| 37      | Indre-et-Loire  | Grand Lac des Peuplerais (Tours)                               | 12                 |
| 37      | Indre-et-Loire  | Lac du Val Joyeux (Château-la-Vallière)                        | 10                 |
| 37      | Indre-et-Loire  | Parc Capitaine (Bourgueil)                                     | 8                  |
| 37      | Indre-et-Loire  | Plage de Bléré   | 13                 |
| 40      | Landes          | Plage Ispe-Navarosse (Biscarosse Lac)                          | 11                 |
| 56      | Morbihan        | Lac au duc (Ploërmel)  | 11                 |
| 64      | Béarn           | Lac d'Aressy   | 11                 |
| 64      | Béarn           | Lac de Baudreix  | 2                  |
| 64      | Côte Basque     | Plage du Lac (Saint-Pée-sur-Nivelle)                           | 4                  |
| 64      | Béarn           | Site d'entraînement de Pau canoe (PCKCU)                       | 4                  |
| 69      | Rhône           | Confluence Rhône Saône (loc. kayak/paddle) (Lyon)              | 11                 |
| 69      | Rhône           | Base nautique municipale Meyzieu Grand Large                   | 11                 |
| 69      | Rhône           | Neyron (vague statique)  | 10                 |
| 69      | Rhône           | Plage de la Baraka (Miribel-plage à Neyron)                    | 14                 |
| 75      | Paris           | Bras Marie 4eme  | 14                 |
| 76      | Seine-Maritime  | Base de Loisirs Mesnil-sous-Jumièges                           | 14                 |
| 76      | Seine-Maritime  | Base nautique Bédane   | 17                 |
| 77      | Seine-et-Marne  | Ancien Moulin de Chelles                                       | 15                 |
| 92      | Hauts-de-Seine  | Villeneuve la Garenne Parc de loisirs nautiques l'île St Denis | 14                 |
| 94      | Val-de-Marne    | Confluence Seine Yerres (Villeneuve St Georges)                | 14                 |
| 94      | Val-de-Marne    | Joinville Plage du banc de sable                               | 15                 |

## NUMBER OF PFAS QUANTIFIED BY COASTAL SITE

| N° dept | Departement       | Site                                      | Nb of PFAS quantified |
|---------|-------------------|---|-----------------------|
| 6       | Alpes-Maritimes   | Plage de Landsberg (Saint-Laurent-du-Var) | <b>3</b>              |
| 6       | Alpes-Maritimes   | Plage de la Lanterne(Nice)                | <b>2</b>              |
| 6       | Alpes-Maritimes   | Plage Mogador (Cagnes sur Mer)            | <b>5</b>              |
| 6       | Alpes-Maritimes   | Trou de l'Ancre (Cannes)                  | <b>5</b>              |
| 13      | Bouches-du-Rhône  | Calanque de Morgiou                       | <b>2</b>              |
| 13      | Bouches-du-Rhône  | Jaï Nord (Marignane)                      | <b>11</b>             |
| 13      | Bouches-du-Rhône  | Plage Cavaou (Fos-sur-Mer)                | <b>8</b>              |
| 13      | Bouches-du-Rhône  | Plage Olga (Port-Saint-Louis-du-Rhône)    | <b>6</b>              |
| 13      | Bouches-du-Rhône  | Plage de l'Huveaune (Marseille)           | <b>2</b>              |
| 13      | Bouches-du-Rhône  | Plage des Catalans (Marseille)            | <b>3</b>              |
| 17      | Charente-Maritime | Plage de la Concurrence (La Rochelle)     | <b>6</b>              |
| 22      | Côtes-d'Armor     | Les Nouelles (Saint-Brieuc)               | <b>3</b>              |
| 22      | Côtes-d'Armor     | Plage Le Rieul amont (Lancieux)           | <b>1</b>              |
| 22      | Côtes-d'Armor     | Plage Le Rieul aval (Lancieux)            | <b>1</b>              |
| 22      | Côtes-d'Armor     | Plage du Valais (Saint-Brieuc)            | <b>4</b>              |
| 22      | Côtes-d'Armor     | Plage des Montiers (Erquy)                | <b>1</b>              |
| 22      | Côtes-d'Armor     | Plage de Renan (Louannec)                 | <b>3</b>              |
| 22      | Côtes-d'Armor     | Plage des Sables d'Or Les Pins (Fréhel)   | <b>1</b>              |
| 22      | Côtes-d'Armor     | Plage du Centre (Erquy)                   | <b>1</b>              |
| 29      | Finistère         | La Cale (Lanvéoc)                         | <b>1</b>              |
| 29      | Finistère         | Plage de Penfoul (Landunvez)              | <b>1</b>              |
| 29      | Finistère         | Petite plage (Bénodet)                    | <b>1</b>              |
| 29      | Finistère         | Plage de la Torche (Plomeur)              | <b>1</b>              |

## NUMBER OF PFAS QUANTIFIED BY COASTAL SITE

| N° dept | Departement      | Site   | Nb of PFAS quantified |
|---------|------------------|--|-----------------------|
| 29      | Finistère        | Port Manec'h (Nevez)                               | <b>1</b>              |
| 29      | Finistère        | Plage de Sainte-Anne-du-Portzic (Brest)            | <b>2</b>              |
| 33      | Gironde          | Plage de Lacanau                                   | <b>2</b>              |
| 33      | Gironde          | Plage du Porge                                     | <b>1</b>              |
| 34      | Hérault          | La Plagette (Mèze - Etang de Thau)                 | <b>9</b>              |
| 34      | Hérault          | Le Boucanet (Grau du Roi)                          | <b>9</b>              |
| 34      | Hérault          | Embouchure du Lez (Lattes)                         | <b>12</b>             |
| 34      | Hérault          | Plage de la Rive Droite (Palavas-Les-Flots) (surf) | <b>7</b>              |
| 34      | Hérault          | Plage Rive Gauche (Palavas-Les-Flots) (surf)       | <b>6</b>              |
| 35      | Ille-et-Vilaine  | Plage du Mole (Saint-Malo)                         | <b>1</b>              |
| 35      | Ille-et-Vilaine  | Plage de la Hoguette (Saint-Malo)                  | <b>1</b>              |
| 35      | Ille-et-Vilaine  | plage du Vallion (Saint Jouan des Guerets)         | <b>2</b>              |
| 40      | Landes           | Plage du Santocha (Capbreton)                      | <b>3</b>              |
| 40      | Landes           | Plage de Labenne                                   | <b>1</b>              |
| 40      | Landes           | Plage Sud (Mimizan)                                | <b>9</b>              |
| 40      | Landes           | Plage du Courant (Mimizan)                         | <b>12</b>             |
| 40      | Landes           | Plage du Rey (Soorts-Hossegor)                     | <b>5</b>              |
| 40      | Landes           | Plage de Tarnos                                    | <b>1</b>              |
| 40      | Landes           | Plage du Vivier (Biscarosse Plage)                 | <b>3</b>              |
| 40      | Landes           | Plage de l'Océan (Souston)                         | <b>3</b>              |
| 44      | Loire-Atlantique | Grande Plage de Saint-Nazaire                      | <b>10</b>             |
| 44      | Loire-Atlantique | Plage des Poilus (Saint-Brévin-les-Pins)           | <b>10</b>             |
| 50      | Manche           | Anse de Querqueville (Cherbourg-en-Cotentin)       | <b>1</b>              |

## NUMBER OF PFAS QUANTIFIED BY COASTAL SITE

| N° dept | Departement         | Site  | Nb PFAS quantified |
|---------|---------------------|---|--------------------|
| 50      | Manche              | Anse de la Masse (Gatteville-le-Phare)          | <b>3</b>           |
| 50      | Manche              | Plage Clairfontaine (Siouville-Hague)           | <b>1</b>           |
| 50      | Manche              | Plage de Cosqueville (Vicq-sur-Mer)             | <b>1</b>           |
| 56      | Morbihan            | Plage des Barges (Billiers)                     | <b>3</b>           |
| 56      | Morbihan            | Le Halguen (Pénestin)                           | <b>1</b>           |
| 56      | Morbihan            | Plage de Conleau (Vannes)                       | <b>1</b>           |
| 56      | Morbihan            | Thoulars (Larmor-Plage)                         | <b>1</b>           |
| 59      | Nord                | Plage du centre (Calais)                        | <b>3</b>           |
| 59      | Nord                | Poste de secours - Digue des Alliés (Dunkerque) | <b>3</b>           |
| 62      | Pas-de-Calais       | Plage du centre (Boulogne-sur-Mer)              | <b>6</b>           |
| 62      | Pas-de-Calais       | Plage du centre (Le Portel)                     | <b>3</b>           |
| 64      | Côte Basque         | Plage de la Barre (Anglet)                      | <b>4</b>           |
| 64      | Côte Basque         | Plage de l'Uhabia (Bidart)                      | <b>1</b>           |
| 64      | Côte Basque         | Plage d'Hendaye                                 | <b>1</b>           |
| 64      | Côte Basque         | Plage Sud (Saint-Jean-de-Luz)                   | <b>1</b>           |
| 64      | Côte Basque         | Plage de la Milady (Biarritz)                   | <b>1</b>           |
| 66      | Pyrénées-Orientales | Plage Sud (Argelès-sur-Mer)                     | <b>3</b>           |
| 66      | Pyrénées-Orientales | Plage du Lido Nord (Canet-en-Roussillon)        | <b>2</b>           |
| 66      | Pyrénées-Orientales | Plage du Mas Larrieu (Argelès-sur-Mer)          | <b>3</b>           |
| 66      | Pyrénées-Orientales | Plage du Sardinial (Canet-en-roussillon)        | <b>3</b>           |
| 76      | Seine-Maritime      | Plage de Pourville (Hautot-sur-Mer)             | <b>4</b>           |
| 76      | Seine-Maritime      | Le Havre plage (Le Havre)                       | <b>8</b>           |
| 76      | Seine-Maritime      | Plage Etretat                                   | <b>6</b>           |

## NUMBER OF PFAS QUANTIFIED BY COASTAL SITE

| N° dépt | Département    | Site  | Nb of PFAS quantified |
|---------|----------------|---|-----------------------|
| 76      | Seine-Maritime | Plage de Fécamp                                   | 5                     |
| 76      | Seine-Maritime | Plage du Butin (Honfleur)                         | 10                    |
| 80      | Somme          | Plage de Cayeux-sur-Mer                           | 5                     |
| 83      | Var            | Plage Ceinturon est-L'Aygade (Hyères)             | 2                     |
| 83      | Var            | Plage les Pins Centre (Toulon)                    | 2                     |
| 85      | Vendée         | Plage des viviers de la mine (Talmont st Hilaire) | 3                     |
| 85      | Vendée         | Plage le Tanchet (Les Sables d'Olonne)            | 4                     |
| 971     | Guadeloupe     | Bas du Fort (Le Gosier)                           | 1                     |
| 971     | Guadeloupe     | Plage de Salée Bananier (Capesterre-Belle-Eau)    | 1                     |
| 974     | La Réunion     | L'étang du Gol (Etang Salé) (Saint-Louis)         | 11                    |
| 974     | La Réunion     | Rivière Sainte-Suzanne                            | 10                    |

**Key to understanding:** For each site, the number of PFAS detected at a concentration above the laboratory's limit of quantification is recorded. The analytical panel covers all the PFAS analysed by the Eurofins laboratory. The rankings presented above identify the substances detected at the greatest number of sites, indicating the corresponding frequency, i.e. the proportion of sites concerned.

## CUMULATIVE TOXIC EQUIVALENT OF PFAS AT FRESHWATER SITES

| N° dept   | Departement           | Site   | ΣPEQ (ng/L)    | Compliance           |
|-----------|-----------------------|--|----------------|----------------------|
| 6         | Alpes-Maritimes       | La Bagarée (La Colle sur Loup)                                 | 4,032          | Compliant            |
| 6         | Alpes-Maritimes       | Les Ferrayonnes (Cagnes sur Mer)                               | 3,662          | Compliant            |
| 33        | Gironde               | Lac de Bordeaux (Bordeaux)                                     | 104,993        | Compliant            |
| 33        | Gironde               | Plaine des Sports (Bègles)                                     | 148,503        | Compliant            |
| 35        | Ille-et-Vilaine       | Etang d'Apigné (Rennes)  | 75,987         | Compliant            |
| 35        | Ille-et-Vilaine       | Plan d'eau des Paturiaux (Vern-sur-Seiche)                     | 24,063         | Compliant            |
| 37        | Indre-et-Loire        | Grand Lac des Peuplerais (Tours)                               | 47,793         | Compliant            |
| 37        | Indre-et-Loire        | Lac du Val Joyeux (Château-la-Vallière)                        | 6,054          | Compliant            |
| 37        | Indre-et-Loire        | Parc Capitaine (Bourgueil)                                     | 4,214          | Compliant            |
| 37        | Indre-et-Loire        | Plage de Bléré (Bléré)   | 19,292         | Compliant            |
| 40        | Landes                | Plage Ispe-Navarosse (Biscarosse Lac)                          | 22,515         | Compliant            |
| 56        | Morbihan              | Lac au duc (Ploërmel)  | 8,153          | Compliant            |
| 64        | Béarn                 | Lac d'Aressy (Aressy)  | 4,509          | Compliant            |
| 64        | Béarn                 | Lac de Baudreix (Baudreix)                                     | 0,74           | Compliant            |
| 64        | Côte Basque           | Plage du Lac (Saint-Pée-sur-Nivelle)                           | 1,376          | Compliant            |
| 64        | Béarn                 | Site d'entraînement de Pau canoe (PCKCU) (Pau)                 | 1,292          | Compliant            |
| 69        | Rhône                 | Confluence Rhône Saône (loc. kayak/paddle) (Lyon)              | 10,721         | Compliant            |
| 69        | Rhône                 | Base nautique municipale Meyzieu Grand Large                   | 11,548         | Compliant            |
| 69        | Rhône                 | Neyron (vague statique)  | 8,456          | Compliant            |
| 69        | Rhône                 | Plage de la Baraka (Miribel-plage à Neyron)                    | 53,82          | Compliant            |
| 75        | Paris                 | Bras Marie 4eme  | 18,492         | Compliant            |
| 76        | Seine-Maritime        | Base de Loisirs Mesnil-sous-Jumièges                           | 19,979         | Compliant            |
| <b>76</b> | <b>Seine-Maritime</b> | <b>Base nautique Bédane</b>                                    | <b>450,161</b> | <b>Non compliant</b> |
| 77        | Seine-et-Marne        | Ancien Moulin de Chelles                                       | 15,577         | Compliant            |
| 92        | Hauts-de-Seine        | Villeneuve la Garenne Parc de loisirs nautiques l'Ile St Denis | 23,105         | Compliant            |
| 94        | Val-de-Marne          | Confluence Seine Yerres (Villeneuve St Georges)                | 19,696         | Compliant            |
| 94        | Val-de-Marne          | Joinville Plage du banc de sable                               | 14,144         | Compliant            |

## CUMULATIVE TOXIC EQUIVALENT OF PFAS AT COASTAL SITES

| N° dept | Departement       | Site                                      | ΣPEQ (ng/L) | Compliance |
|---------|-------------------|---|-------------|------------|
| 6       | Alpes-Maritimes   | Plage de Landsberg (Saint-Laurent-du-Var) | 0,696       | Compliant  |
| 6       | Alpes-Maritimes   | Plage de la Lanterne(Nice)                | 0,59        | Compliant  |
| 6       | Alpes-Maritimes   | Plage Mogador (Cagnes sur Mer)            | 1,337       | Compliant  |
| 6       | Alpes-Maritimes   | Trou de l'Ancre (Cannes)                  | 1,205       | Compliant  |
| 13      | Bouches-du-Rhône  | Calanque de Morgiou                       | 0,63        | Compliant  |
| 13      | Bouches-du-Rhône  | Jaï Nord (Marignane)                      | 13,411      | Compliant  |
| 13      | Bouches-du-Rhône  | Plage Cavaou (Fos-sur-Mer)                | 3,628       | Compliant  |
| 13      | Bouches-du-Rhône  | Plage Olga (Port-Saint-Louis-du-Rhône)    | 2,025       | Compliant  |
| 13      | Bouches-du-Rhône  | Plage de l'Huveaune (Marseille)           | 0,6         | Compliant  |
| 13      | Bouches-du-Rhône  | Plage des Catalans (Marseille)            | 1,01        | Compliant  |
| 17      | Charente-Maritime | Plage de la Concurrence (La Rochelle)     | 2,29        | Compliant  |
| 22      | Côtes-d'Armor     | Plage Les Nouelles (Plérin)               | 0,97        | Compliant  |
| 22      | Côtes-d'Armor     | Plage Le Rieul amont (Lancieux)           | 0,58        | Compliant  |
| 22      | Côtes-d'Armor     | Plage Le Rieul aval (Lancieux)            | 0,52        | Compliant  |
| 22      | Côtes-d'Armor     | Plage du Valais (Saint-Brieuc)            | 1,878       | Compliant  |
| 22      | Côtes-d'Armor     | Plage des Montiers (Erquy)                | 0,48        | Compliant  |
| 22      | Côtes-d'Armor     | Plage de Renan (Louannec)                 | 1,01        | Compliant  |
| 22      | Côtes-d'Armor     | Plage des Sables d'Or Les Pins (Fréhel)   | 0,54        | Compliant  |
| 22      | Côtes-d'Armor     | Plage du Centre (Erquy)                   | 0,54        | Compliant  |
| 29      | Finistère         | La Cale (Lanvéoc)                         | 0,44        | Compliant  |
| 29      | Finistère         | Plage de Penfoul (Landunvez)              | 0,54        | Compliant  |
| 29      | Finistère         | Petite plage (Bénodet)                    | 0,5         | Compliant  |
| 29      | Finistère         | Plage de la Torche (Plomeur)              | 0,36        | Compliant  |

## CUMULATIVE TOXIC EQUIVALENT OF PFAS AT COASTAL SITES

| N° dept | Departement      | Site  | ΣPEQ (ng/L) | Compliance |
|---------|------------------|---|-------------|------------|
| 29      | Finistère        | Port Manec'h (Nevez)                            | 0,46        | Compliant  |
| 29      | Finistère        | Plage de Sainte-Anne-du-Portzic (Brest)         | 0,72        | Compliant  |
| 33      | Gironde          | Plage de Lacanau                                | 0,48        | Compliant  |
| 33      | Gironde          | Plage du Porge                                  | 0,38        | Compliant  |
| 34      | Hérault          | La Plagette (Mèze - Etang de Thau)              | 4,908       | Compliant  |
| 34      | Hérault          | Le Boucanet (Grau du Roi)                       | 4,215       | Compliant  |
| 34      | Hérault          | Embouchure du Lez (Lattes)                      | 13,916      | Compliant  |
| 34      | Hérault          | Plage de la Rive Droite (Palavas-Les-Flots) (s) | 3,067       | Compliant  |
| 34      | Hérault          | Plage Rive Gauche (Palavas-Les-Flots) (surf)    | 1,755       | Compliant  |
| 35      | Ille-et-Vilaine  | Le Mole (Saint-Malo)                            | 0,84        | Compliant  |
| 35      | Ille-et-Vilaine  | Plage de la Hoguette (Saint-Malo)               | 0,72        | Compliant  |
| 35      | Ille-et-Vilaine  | plage du Vallion (Saint Jouan des Guerets)      | 1,71        | Compliant  |
| 40      | Landes           | Plage du Santocha (Capbreton)                   | 0,62        | Compliant  |
| 40      | Landes           | Plage de Labenne                                | 0,54        | Compliant  |
| 40      | Landes           | Plage Sud (Mimizan)                             | 6,519       | Compliant  |
| 40      | Landes           | Plage du Courant (Mimizan)                      | 18,876      | Compliant  |
| 40      | Landes           | Plage du Rey (Soorts-Hossegor)                  | 1,692       | Compliant  |
| 40      | Landes           | Plage de Tarnos                                 | 0,52        | Compliant  |
| 40      | Landes           | Plage du Vivier (Biscarosse Plage)              | 0,91        | Compliant  |
| 40      | Landes           | Plage de l'Océan (Souston)                      | 0,64        | Compliant  |
| 44      | Loire-Atlantique | Grande Plage de Saint-Nazaire                   | 5,753       | Compliant  |
| 44      | Loire-Atlantique | Plage des Poilus (Saint-Brévin-les-Pins)        | 6,387       | Compliant  |
| 50      | Manche           | Anse de Querqueville (Cherbourg-en-Coter        | 0,64        | Compliant  |

## CUMULATIVE TOXIC EQUIVALENT OF PFAS AT COASTAL SITES

| N° dept | Departement        | Site  | ΣPEQ (ng/L) | Compliance |
|---------|--------------------|---|-------------|------------|
| 50      | Manche             | Anse de la Masse (Gatteville-le-Phare)          | 1,17        | Compliant  |
| 50      | Manche             | Plage Clairfontaine (Siouville-Hague)           | 1,02        | Compliant  |
| 50      | Manche             | Plage de Cosqueville (Vicq-sur-Mer)             | 1,5         | Compliant  |
| 56      | Morbihan           | Plage des Barges (Billiers)                     | 1,964       | Compliant  |
| 56      | Morbihan           | Le Halguen (Pénestin)                           | 0,66        | Compliant  |
| 56      | Morbihan           | Plage de Conleau (Vannes)                       | 0,62        | Compliant  |
| 56      | Morbihan           | Thoulars (Larmor-Plage)                         | 0,58        | Compliant  |
| 59      | Nord               | Plage du centre (Calais)                        | 1,53        | Compliant  |
| 59      | Nord               | Poste de secours - Digue des Alliés (Dunkerque) | 1,3         | Compliant  |
| 62      | Pas-de-Calais      | Plage du centre (Boulogne-sur-Mer)              | 1,765       | Compliant  |
| 62      | Pas-de-Calais      | Plage du centre (Le Portel)                     | 1,23        | Compliant  |
| 64      | Côte Basque        | Plage de la Barre (Anglet)                      | 1,882       | Compliant  |
| 64      | Côte Basque        | Plage de l'Uhabia (Bidart)                      | 0,74        | Compliant  |
| 64      | Côte Basque        | Plage d'Hendaye                                 | 0,64        | Compliant  |
| 64      | Côte Basque        | Plage Sud (Saint-Jean-de-Luz)                   | 0,92        | Compliant  |
| 64      | Côte Basque        | Plage de la Milady (Biarritz)                   | 0,92        | Compliant  |
| 66      | Pyrénées-Orientale | Plage Sud (Argelès-sur-Mer)                     | 1,55        | Compliant  |
| 66      | Pyrénées-Orientale | Plage du Lido Nord (Canet-en-Roussillon)        | 0,75        | Compliant  |
| 66      | Pyrénées-Orientale | Plage du Mas Larrieu (Argelès-sur-Mer)          | 1,39        | Compliant  |
| 66      | Pyrénées-Orientale | Plage du Sardinal (Canet-en-roussillon)         | 0,82        | Compliant  |
| 76      | Seine-Maritime     | Plage de Pourville (Hautot-sur-Mer)             | 1,248       | Compliant  |
| 76      | Seine-Maritime     | Le Havre plage (Le Havre)                       | 2,255       | Compliant  |
| 76      | Seine-Maritime     | Plage Etretat                                   | 1,566       | Compliant  |

## CUMULATIVE TOXIC EQUIVALENT OF PFAS AT COASTAL SITES

| N° dept | Departement    | Site  | ΣPEQ (ng/L) | Compliance |
|---------|----------------|---|-------------|------------|
| 76      | Seine-Maritime | Plage de Fécamp                                   | 0,997       | Compliant  |
| 76      | Seine-Maritime | Plage du Butin (Honfleur)                         | 4,638       | Compliant  |
| 80      | Somme          | Plage de Cayeux-sur-Mer                           | 2,418       | Compliant  |
| 83      | Var            | Plage Ceinturon est-L'Aygade (Hyères)             | 0,63        | Compliant  |
| 83      | Var            | Plage les Pins Centre (Toulon)                    | 0,57        | Compliant  |
| 85      | Vendée         | Plage des viviers de la mine (Talmont st Hilaire) | 1,28        | Compliant  |
| 85      | Vendée         | Plage le Tanchet (Les Sables d'Olonne)            | 0,88        | Compliant  |
| 971     | Guadeloupe     | Bas du Fort (Le Gosier)                           | 0,48        | Compliant  |
| 971     | Guadeloupe     | Plage de Salée Bananier (Capesterre-Belle-E)      | 0,4         | Compliant  |
| 974     | La Réunion     | L'étang du Gol (Etang Salé) (Saint-Louis)         | 14,191      | Compliant  |
| 974     | La Réunion     | Rivière Sainte-Suzanne                            | 4,6         | Compliant  |

**Key to understanding:** For each sample, the concentration of each of the 26 PFAS studied is multiplied by its relative potency factor (RPF), a coefficient that expresses its toxicity relative to a reference molecule, PFOA, as established by the RIVM. The sum of these products provides a cumulative toxic equivalent, known as ΣPEQ and expressed in ng PFOA-equivalent per litre, which is then compared with the threshold of 280 ng/L applicable to surface waters. The proposed guideline values address growing health concerns linked to recreational activities by providing a method for assessing bathing water quality.