

PFAS contaminated soils : State of the law and prospective comparison with the United States

Sols pollués aux PFAS : Etat du droit et comparaison prospective avec les Etats-Unis

Carine Le Roy-Gleizes
Partner

Avocate Associée au Barreau de Paris

Foley Hoag



Lille

28th March 2023

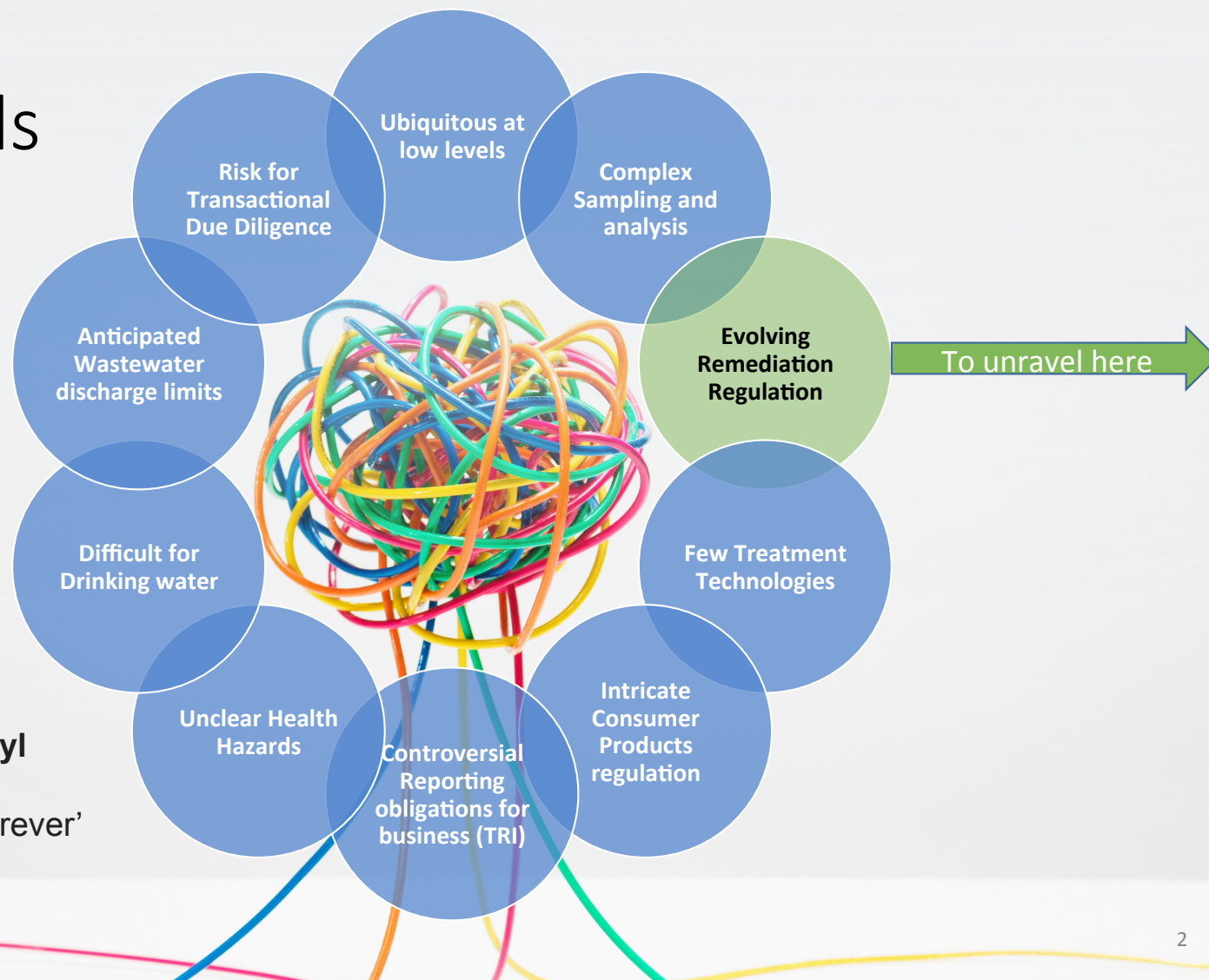
Lydia B. Duff
Associate General Counsel-EHS

Directrice juridique
Hygiène, Sécurité, Environnement

W. R. Grace & Co.



Many strands in the PFAS tangle



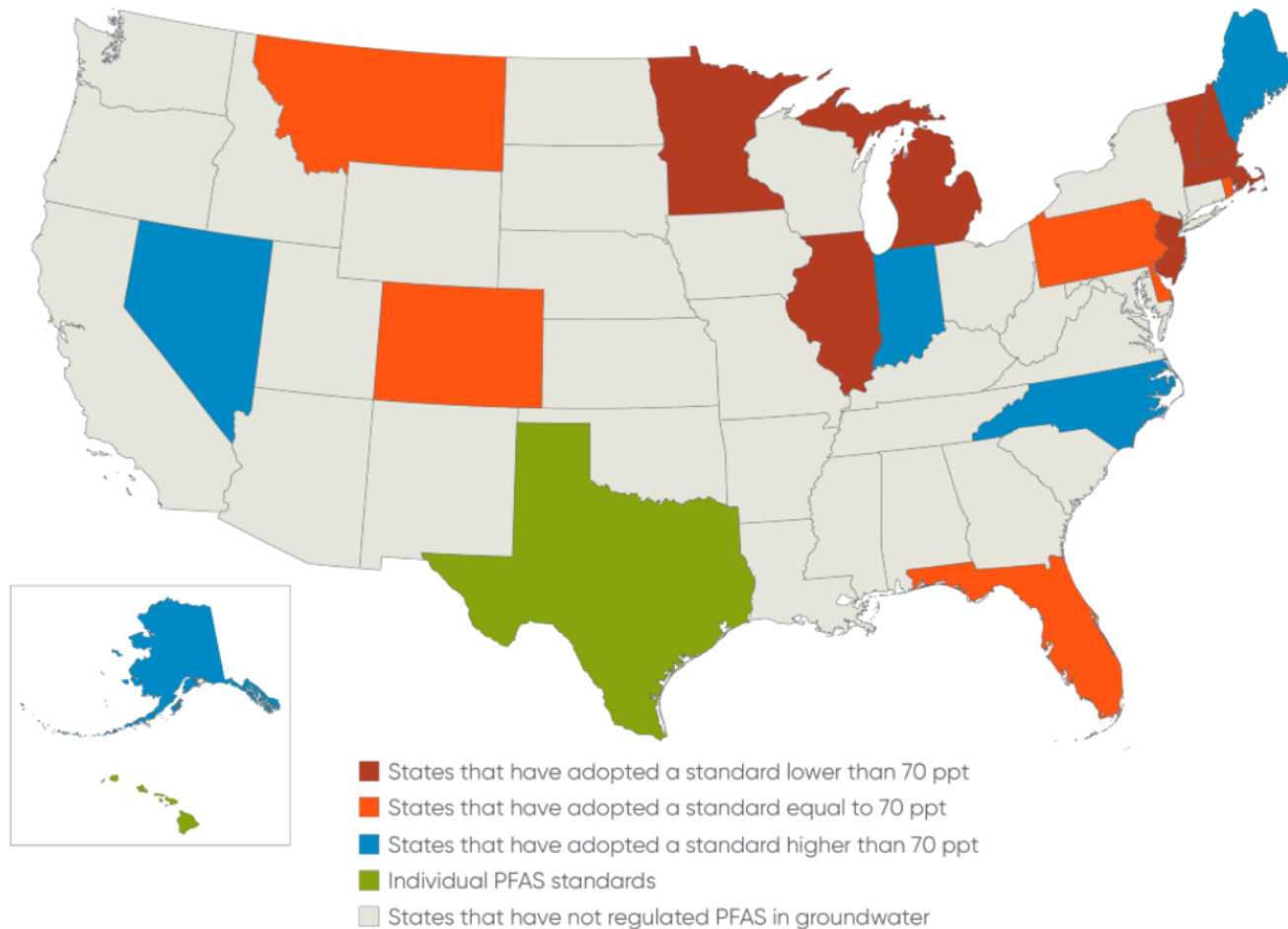
Emerging Chemicals Regulations Emerging

- EPA proposing PFOA and PFOS as Superfund “hazardous substances”
- No federal EPA cleanup standard in soil or groundwater
- Regional Screening Level for six chemicals at Superfund sites
- Soil and groundwater testing requirements increasing for existing remediation sites – reopening mature cleanup projects
- EPA Enforcement Discretion anticipated

Remediation challenges

- Rigorous sampling protocols
- Low detection levels
- Limited treatment technologies
- Omnipresent
- Unclear health impacts

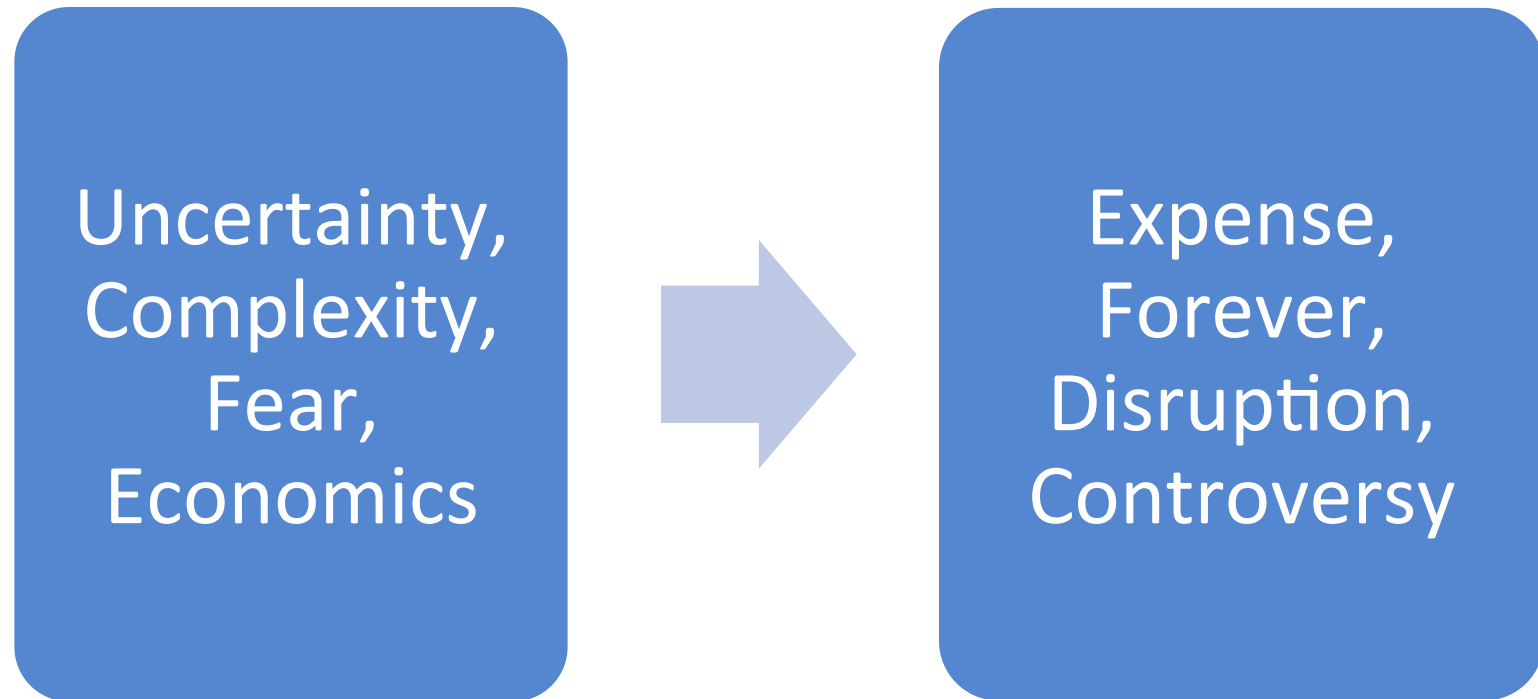
PFAS GROUNDWATER REGULATIONS



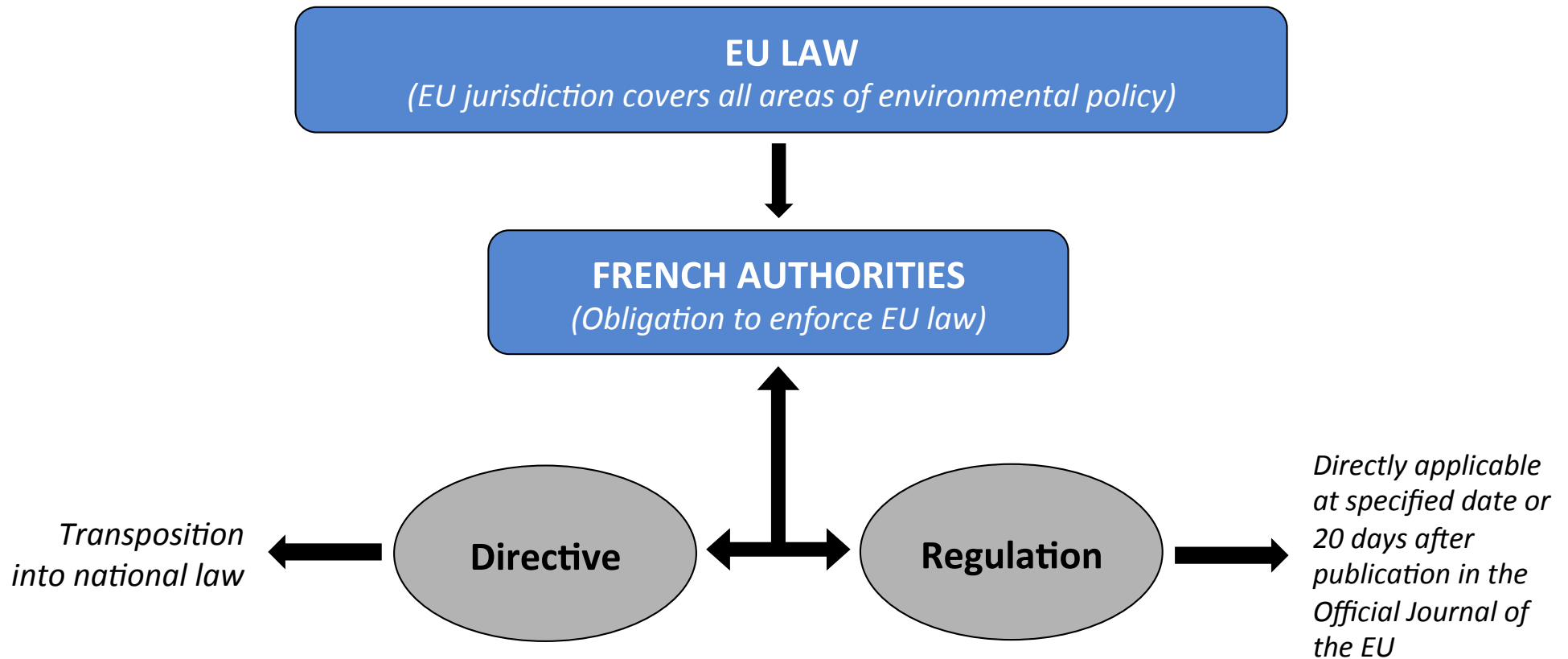
Target concentrations range from 2 ppt to 667,000 parts per trillion

Substances covered range from one to many, e.g.: PFOA, PFOS, PFBA, PFNA, PFDA, etc.

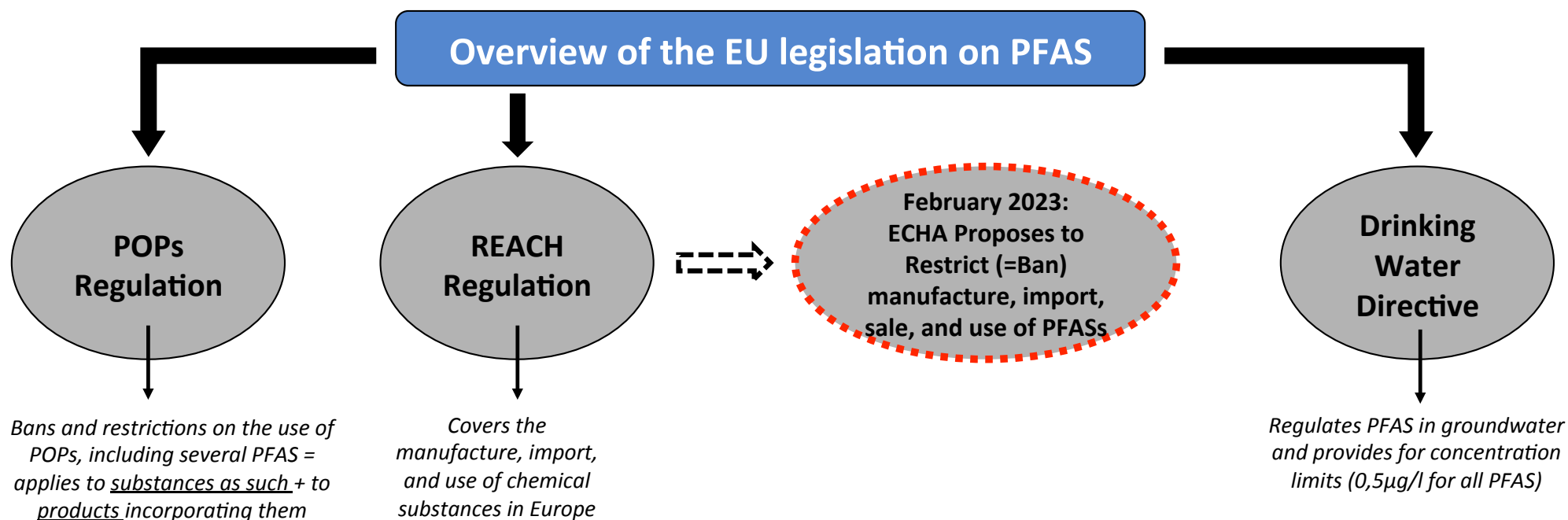
Forecast



Application of EU law at the French level



The European Union legislation on PFAS

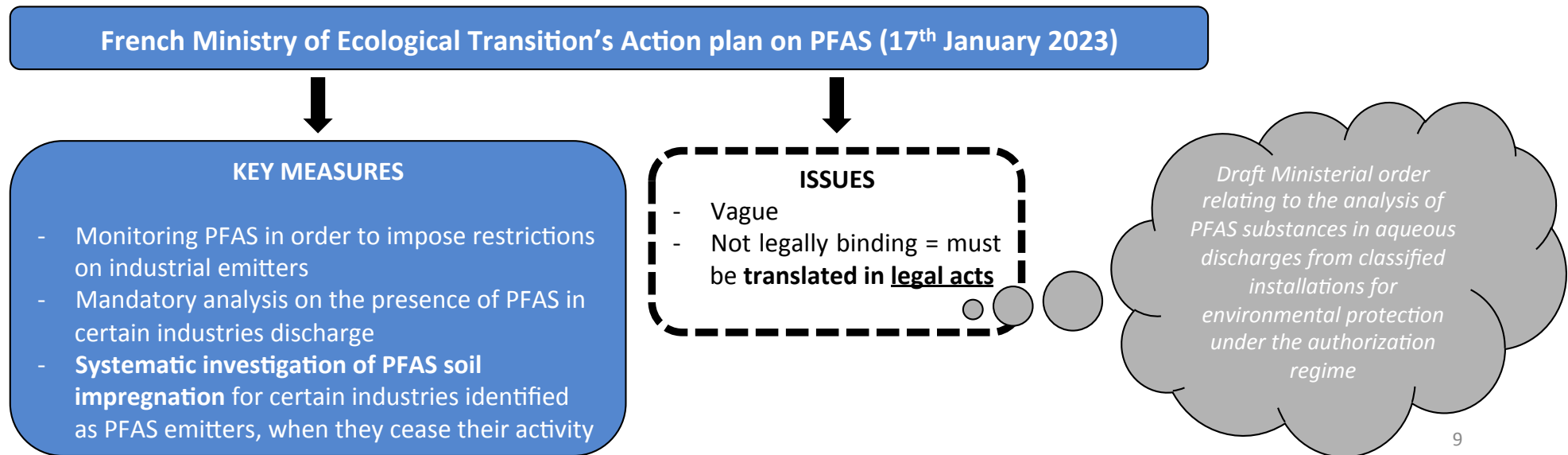


Emerging regulations in France

ANSES conducted studies on PFAS to : collect more information ; evaluate the risks for human health ; develop toxicological reference values for several PFAS

Climate and Resilience Law (Law n° 2021 1104 of 22/08/2021, Art. 46) : requires the Government to submit a report to Parliament in August 2023 on the pollution of water and soil by PFAS and applicable solutions for remediation

▲ **French legislation on PFAS relies almost exclusively on EU law** : the recent adoption of an action plan was made “pending a European decision on the ban of PFAS”



Comparison USA v. France

USA

No harmonized federal clean-up regulation

Varied and evolving State PFAS regulations

Product regulations distinct from soil and water regs

Drinking water regulation evolving rapidly

SIMILAR ISSUES :

Unclear what's a PFAS

Analytical methods not harmonized or effective

Lack of information on health impact

Difficulties in establishing a causal link between activities and PFAS

FRANCE

Directly applicable European Regulations

Potential for national laws throughout the EU

Quite developed product regulations

No legislation on contaminated soil remediation

Background Information



References - EU

- **ECHA Proposal to Restrict PFAS**
 - [All news - ECHA \(europa.eu\)](#)
- **CEFIC Approach**
 - [Benefits & Applications - FPP4EU](#)
- **The European Commission Staff Working Document on PFAS (14th October 2020)**
 - [SWD PFAS.pdf \(europa.eu\)](#)
- **Climate and Resilience Law (Law n° 2021 1104 of 22/08/2021, Art. 46)**
 - <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32022D2358>

References

- EPA proposing PFOA and PFOS as Superfund “hazardous substances”
 - <https://www.federalregister.gov/documents/2022/09/06/2022-18657/designation-of-perfluorooctanoic-acid-pfoa-and-perfluorooctanesulfonic-acid-pfos-as-cercla-hazardous>
- No federal EPA cleanup standard in soil or groundwater
 - <https://www.epa.gov/system/files/documents/2022-11/PFAS%20Roadmap%20Progress%20Report%20final%20Nov%202017.pdf>
- Regional Screening Level for six chemicals at Superfund sites.
 - <https://www.epa.gov/newsreleases/epa-adds-five-pfas-chemicals-list-regional-screening-and-removal-management-levels>
- State regulations vary lots
 - [ITRCPFASWaterandSoilValuesTables_OCT2022-FINAL.xlsx \(live.com\)](#)
 - <https://www.jdsupra.com/legalnews/pfas-update-state-by-state-regulation-7249840/>
 - <https://www.bclplaw.com/en-US/insights/pfas-update-state-by-state-regulation-of-pfas-substances-in-groundwater.html>
 - [DRAFT - Draft Guidance for Investigating and Remediating PFAS Contamination in Washington State](#)

State PFAS Groundwater Regulations

Participating States	Concentration Level	Type of Regulation
Illinois	2 ppt (stated by the Illinois Pollution Control Agency as 2 ng/L)+D46	PFOA (Guidance)
New Jersey	2 ppt (stated by the regulation as 0.002 µg/L)	Chloroperfluoropolyether carbonates (1) (Clean Up)
Michigan	6 ppt	PFNA (Clean Up)
Michigan	8 ppt	PFOA (Clean Up)
New Hampshire	11 ppt	PFNA (Clean Up)
New Hampshire	12 ppt	PFOA (Clean Up)
New Jersey	13 ppt	PFNA and PFOS (Clean Up)
Illinois	14 ppt (stated by the Illinois Pollution Control Agency as 14 ng/L)	PFOS (Guidance)
New Jersey	14 ppt	PFOA (Clean Up)
New Hampshire	15 ppt	PFOS (Clean Up)
Minnesota	15 ppt	PFOS (Guidance)
Michigan	16 ppt	PFOS (Clean Up)
New Hampshire	18 ppt	PFHxS (Clean Up)
Massachusetts	20 ppt (stated in the regulation as .02 ppb)	6 PFAS Substances combined : PFOA, PFOS, PFHxS, PFNA, PFHpA, and PFDA (Clean Up)
Vermont	20 ppt (stated in the regulation as .02 µg/L)	5 PFAS substances combined: PFHpA, PFHxS, PFNA, PFOS and PFOA (Notification)
Illinois	21 ppt (stated by the Illinois Pollution Control Agency as 21 ng/L)	PFNA (Guidance)
Minnesota	35 ppt	PFOA (Guidance)
Hawaii	40 ppt, etc.[2]	PFOA and PFOS; 16 other PFAS substances (Advisory)
Minnesota	47 ppt	PFHxS (Guidance)
Michigan	51 ppt	PFHxS (Clean Up)
Colorado	70 ppt	Site-specific Standard for PFOA and PFOS (Clean Up)
Delaware, Florida, Montana, Pennsylvania, and Rhode Island	70 ppt	Follow the EPA Health Advisory Level: PFOS and PFOA combined (Clean Up, Guidance and Notification)

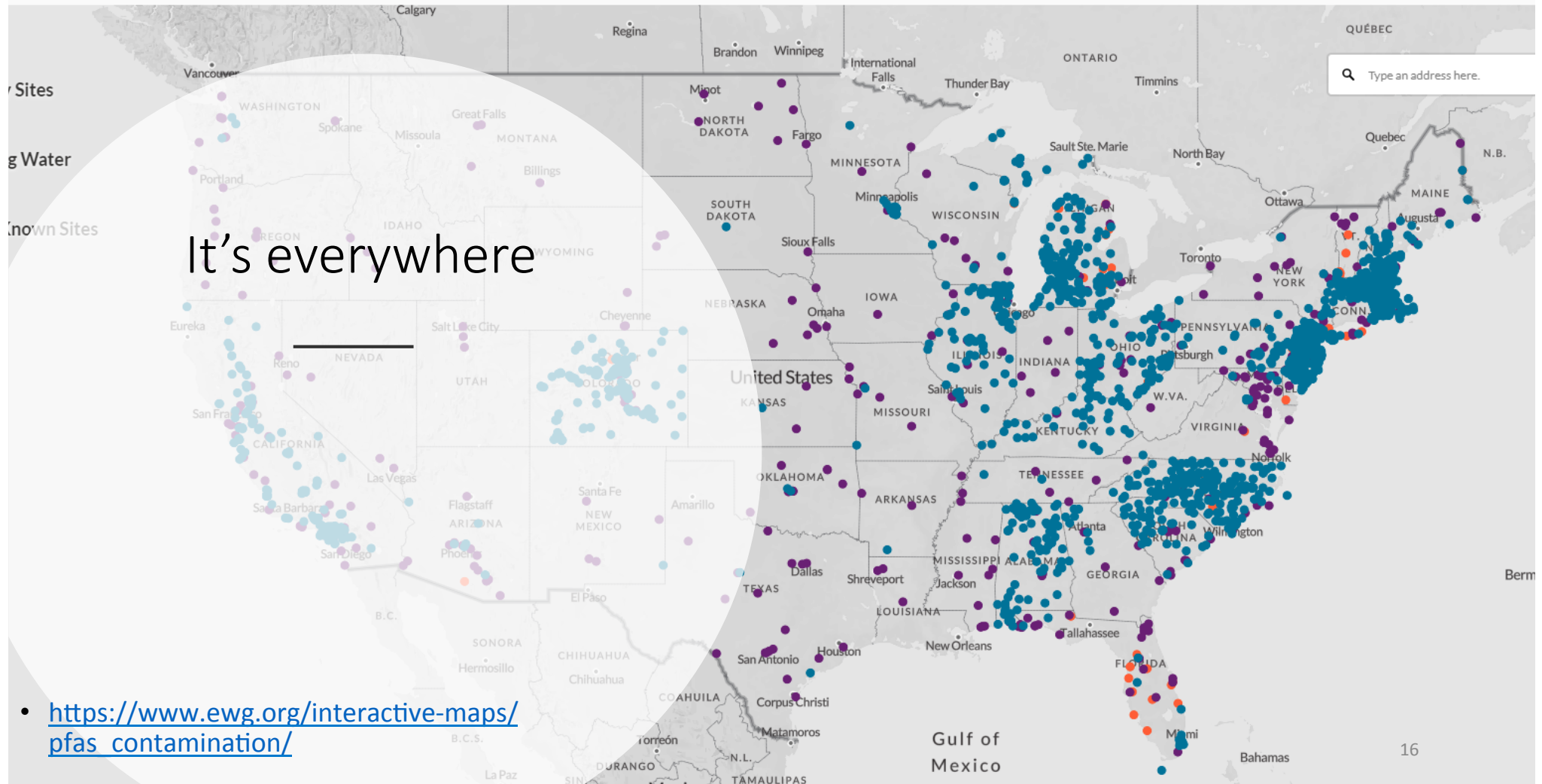
Illinois	140 ppt (stated by the Illinois Pollution Control Agency as 140 ng/L)	PFHxS (Guidance)
Texas	250 ppt, etc.[3]	PFOA; 15 other PFAS Substances (Clean Up)
Michigan	370 ppt	HFPO-DA (Clean Up)
Alaska	400 ppt (stated in the regulation as 0.4 µg/L)	PFOA and PFOS separately (Clean Up)
Maine	400 ppt (stated in the regulation as 0.4 ppb)	PFOA and PFOS combined (Guidance) Note: Maine has both Residential and Construction Standards
Michigan	420 ppt	PFBS (Clean Up)
Nevada	667 ppt (stated in the regulation as 667 µg/L)	PFOA and PFOS (Guidance)
Minnesota	2,000 ppt	PFBS (Guidance)
North Carolina	2,000 ppt	PFOA (Guidance)
Illinois	2,100 ppt (stated by the Illinois Pollution Control Agency as 2,100 ng/L)	PFBS (Guidance)
Minnesota	7,000 ppt	PFBA (Guidance)
Pennsylvania	10,000 ppt (stated in the regulation as 10 µg/L)	PFBS; Residential Property (Clean Up)
Pennsylvania	29,000 ppt (stated in the regulation as 29 µg/L)	PFBS; Non-residential Property (Clean Up)
Michigan	400,000 ppt	PFHxA (Clean Up)
Maine	400,000 ppt (stated in the regulation as 400 ppb)	PFBS (Guidance) Note: Maine has both Residential and Construction Standards
Illinois	560,000 ppt (stated by the Illinois Pollution Control Agency as 560,000 ng/L)	PFHxA (Guidance)
Indiana	400,000 ppt (stated in the regulation as 400 µg/L)	PFBS (Guidance)
Nevada	667,000 ppt (stated in the regulation as 667 µg/L)	PFBS (Guidance)

<https://www.bclplaw.com/en-US/insights/pfas-update-state-by-state-regulation-of-pfas-substances-in-groundwater.html>

- **1000s of PFAS Chemicals** (OECD: 4730; USEPA 14735;
 - [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV-IM-MONO\(2018\)7&doclanguage=en](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV-IM-MONO(2018)7&doclanguage=en)
 - <https://comptox.epa.gov/dashboard/chemical-lists/PFASSTRUCTV5>
 - [Per and Polyfluoroalkyl Substances \(PFAS\) Family Tree \(itrcweb.org\)](https://www.itrcweb.org/per-and-polyfluoroalkyl-substances-pfas-family-tree/)
- **Many Varied Uses**
 - Firefighting foam (AFFF) <https://leg.colorado.gov/bills/hb20-1119> (Colorado ban)
 - <https://www.atsdr.cdc.gov/pfas/health-effects/exposure.html>
- **Ubiquitous at low levels**
 - <https://www.woodardcurran.com/projects/massachusetts-soils-study-sheds-light-on-background-pfas-concentrations/>
 - <https://www.ewr.org/interactive-maps/pfas-contamination/>
- **Complex Sampling and analysis**
 - [PFAS — Per- and Polyfluoroalkyl Substances \(itrcweb.org\)](https://www.itrcweb.org/per-and-polyfluoroalkyl-substances-pfas-family-tree/)
- **Evolving Remediation Regulation**
- **Few Treatment Technologies**
 - <https://www.woodardcurran.com/projects/addressing-the-presence-of-pfas-with-granular-activated-carbon/>
- **Intricate Consumer Products regulation**
 - <https://www.maine.gov/dep/spills/topics/pfas/PFAS-products/index.html> Banned in Maine, 2030
 - <https://www.dec.ny.gov/chemical/124367.html> New York bans in food packaging 2023
 - file:///C:/Users/lduff/Downloads/20210AB1200_90.pdf California bans in food packaging and cookware
- **Controversial Reporting obligations for business (TRI)**
 - <https://www.arnoldporter.com/en/perspectives/blogs/environmental-edge/2022/12/epa-proposes-changes-to-tri-reporting-of-pfas>
 - https://www.federalregister.gov/documents/2022/12/05/2022-26022/changes-to-reporting-requirements-for-per-and-polyfluoroalkyl-substances-and-to-supplier?utm_source=federalregister.gov&utm_medium=email&utm_campaign=subscription+mailing+list
- **Unclear Health Hazards**
- **Difficult for Drinking water**
 - <https://www.awwa.org/AWWA-Articles/awwa-statement-on-epa-pfas-health-advisories>
 - <https://www.epa.gov/sdwa/drinking-water-health-advisories-pfoa-and-pfos>
 - https://www.dep.pa.gov/Citizens/My-Water/drinking_water/PFAS/Pages/default.aspx
- **Anticipated Wastewater discharge limits**
 - <https://www.epa.gov/newsreleases/epa-issues-guidance-states-reduce-harmful-pfas-pollution>
- **Risk for Transactional Due Diligence**
 - <https://www.natlawreview.com/article/epa-issues-direct-final-rule-to-adapt-new-astm-e1527-21-phase-i-esa-standard>



PFAS Contamination in the U.S. (June 8, 2022)



- https://www.ewg.org/interactive-maps/pfas_contamination/

Drinking water

2022 Health Advisory

- PFOA: 004 ppt (Interim Value)
- PFOS: 02 ppt (Interim Value)
- GenX/HFPO-DA: 10 ppt (Final Value)
- PFBS: 2,000 ppt (Final Value)

2016 Health Advisory

- PFOA: 70 ppt
- PFOS: 70 ppt

Not binding

New numbers are orders of magnitude below detection level

PFAS DRINKING WATER REGULATIONS

