

Table S1 Sampling information in 4 groundwater units

Groundwater Unit	Groundwater samples	Well depth.m ⁻¹
G1	A1 - A12	4 - 40
G2	A13 - A34	25 - 100
G3	A35 - A51	45 - 100
G4	A52 - A62	180 - 500

Table S2 Calibration curves and the results of recovery and precision test of ten PFCs

Analyte	Internal standards	The calibration curves	LOD (ng·L ⁻¹)	LOQ (ng·L ⁻¹)	Recovery (%)	RSD (%)
PFBA	M-PFOA	Y=0.533*X-8.164	0.04	0.13	87.1	7.5
PFPeA	M-PFOA	Y=0.693*X-21.291	0.03	0.10	101.7	8.1
PFHxA	M-PFOA	Y=0.705*X-7.426	0.14	0.47	95.8	8.0
PFHpA	M-PFOA	Y=0.196*X-5.905	0.01	0.03	99.1	9.4
PFOA	M-PFOA	Y=0.007*X-0.025	0.04	0.13	98.4	8.9
PFNA	M-PFOA	Y=0.007*X-0.014	0.02	0.07	99.4	9.4
PFDA	M-PFOA	Y=0.933*X+7.914	0.01	0.03	87.9	6.7
PFBS	M-PFOS	Y=0.265*X-14.345	0.03	0.10	88.8	7.3
PFHxS	M-PFOS	Y=0.272*X-9.298	0.03	0.10	92.7	2.9
PFOS	M-PFOS	Y=0.217*X-10.062	0.01	0.03	91.3	6.6

Table S3 Basic properties of groundwater

	Temperature/ °C	pH	DO/mg·L ⁻¹	ORP
Minimum	6.7	6.82	0.03	4.5
Maximum	17.6	8.28	8.90	224
Mean	14.91	7.53	3.53	108.05

Median	15.1	7.51	2.71	101.95
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Table S4. Loadings, variance and cumulative variance for principal components resulting from PCA analysis.

Compound	Principal Component	
	1	2
PFBA	0.944	-0.012
PFPeA	0.849	0.093
PFHxA	0.726	0.465
PFHpA	0.837	0.55
PFOA	0.046	0.807
PFNA	0.133	0.79
PFDA	0.111	0.879
PFBS	0.891	-0.012
PFHxS	0.758	0.25
PFOS	0.051	0.924
Total	2.84	2.08
% of Variance	44.42	20.84
Cumulative %	44.42	65.26