

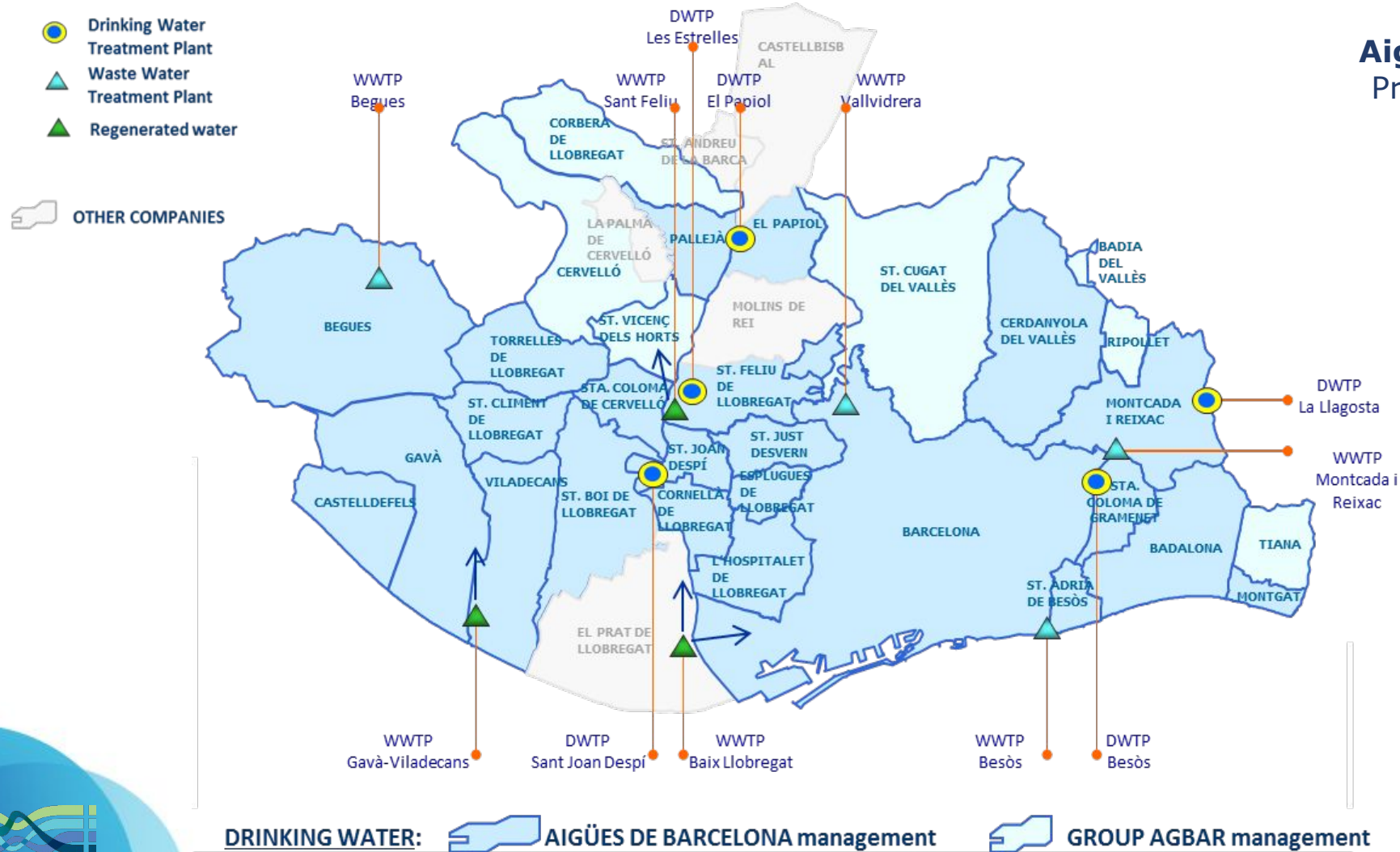


Water Quality Hub

MSc. Gemma Saucedo Pagès
Microbiology Laboratory
Aigües de Barcelona
gsaucedo@aiguesdebarcelona.cat

Aigües de Barcelona

Barcelona's water supply



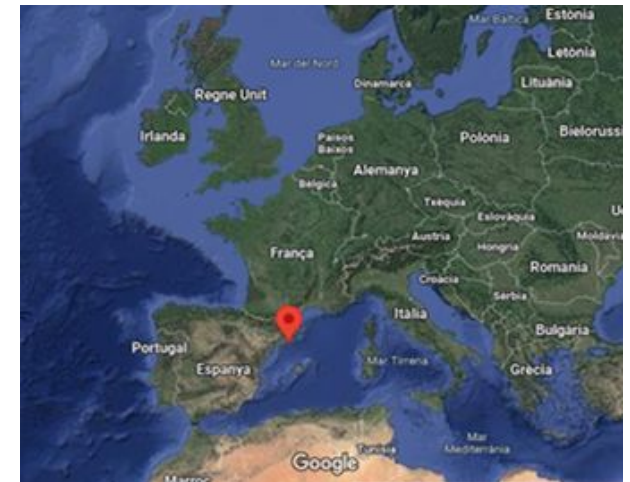
Aigües de Barcelona (Public (15%) – Private (85%) - Partnership company)

Population served: **3 M inhabitants**

Supplied water (2021): **182 hm³**

Supplied water (2002): **254 hm³**

Water supply network: **4.653 km**



AB: Physico-chemical on-line systems



Sensor platform



			Nº Analitzadors 2021	
Analitzadors en continu	Transport (m ³ /any)	Nº analitz. Clor	1770	
		APMIX4	4	
		S:CAN	26	
	Distribució (m ³ /any)	Prominent	42	
		Nº analitz. THM	THM-100	4
		Nº analitz. Clor	Athenea	124
		Akwametric	4	
		Total	219	

AB: On-line systems on Microbiology

Our experience:

- ATP (bacterial activity)
- TVC (viable count)
- Coliforms & E. coli (colorimetric)

Very useful for DWTP treatment steps

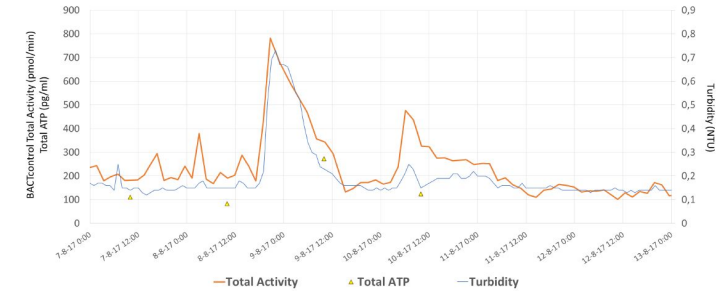
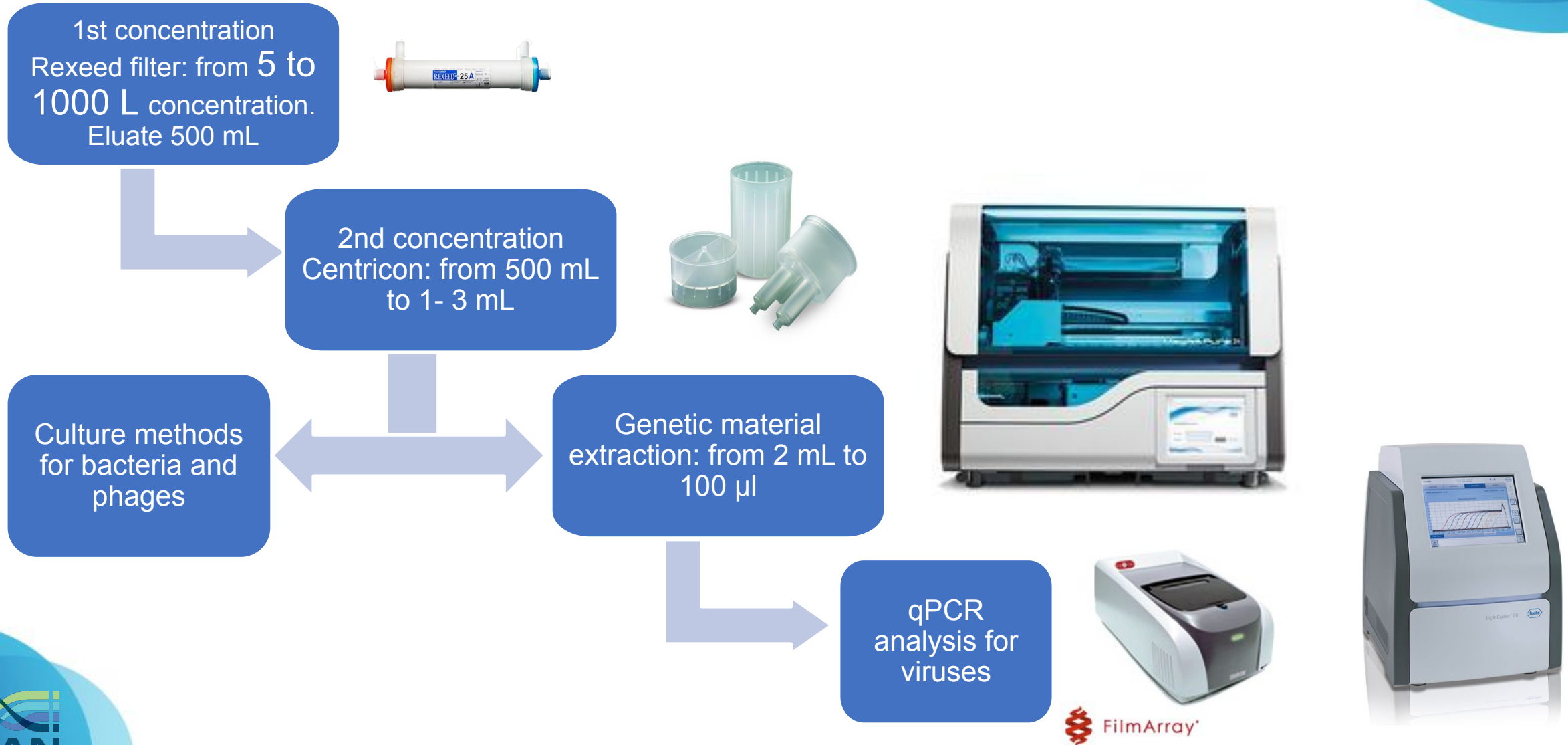


Figure 4 – TA and turbidity follow-up after sand filtration during a quality event coming from river water



Microbiology protocol for Drinking Water



Results

Rexeed

- It is able to recover the 3 kingdoms (protozoa, bacteria and virus) with high recovery levels

Quantify

- Able to quantify very low levels in all cases for treatment and distribution samples: Lower Detection Limits, more sensitivity and allows efficiency reduction calculation

Time

- “Quick” time of response

Concentration

- Importance of concentrate higher volumes, being more representative

Risk

- What is the real risk? How many liters of water do we have to drink to get sick?

Conclusions

