

Contaminants of Emerging Concern are Here to Stay

The New Regulatory Climate...

Clean Water Agencies Prepare to Act

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A Perspective on PPCPs

Elizabeth Toot-Levy

Environmental Specialist

Northeast Ohio Regional Sewer District

The ongoing debate...

- What are they called?
 - PPCPs
 - Contaminants of Emerging Concern
 - Trace Organic Compounds
 - Emerging Contaminants

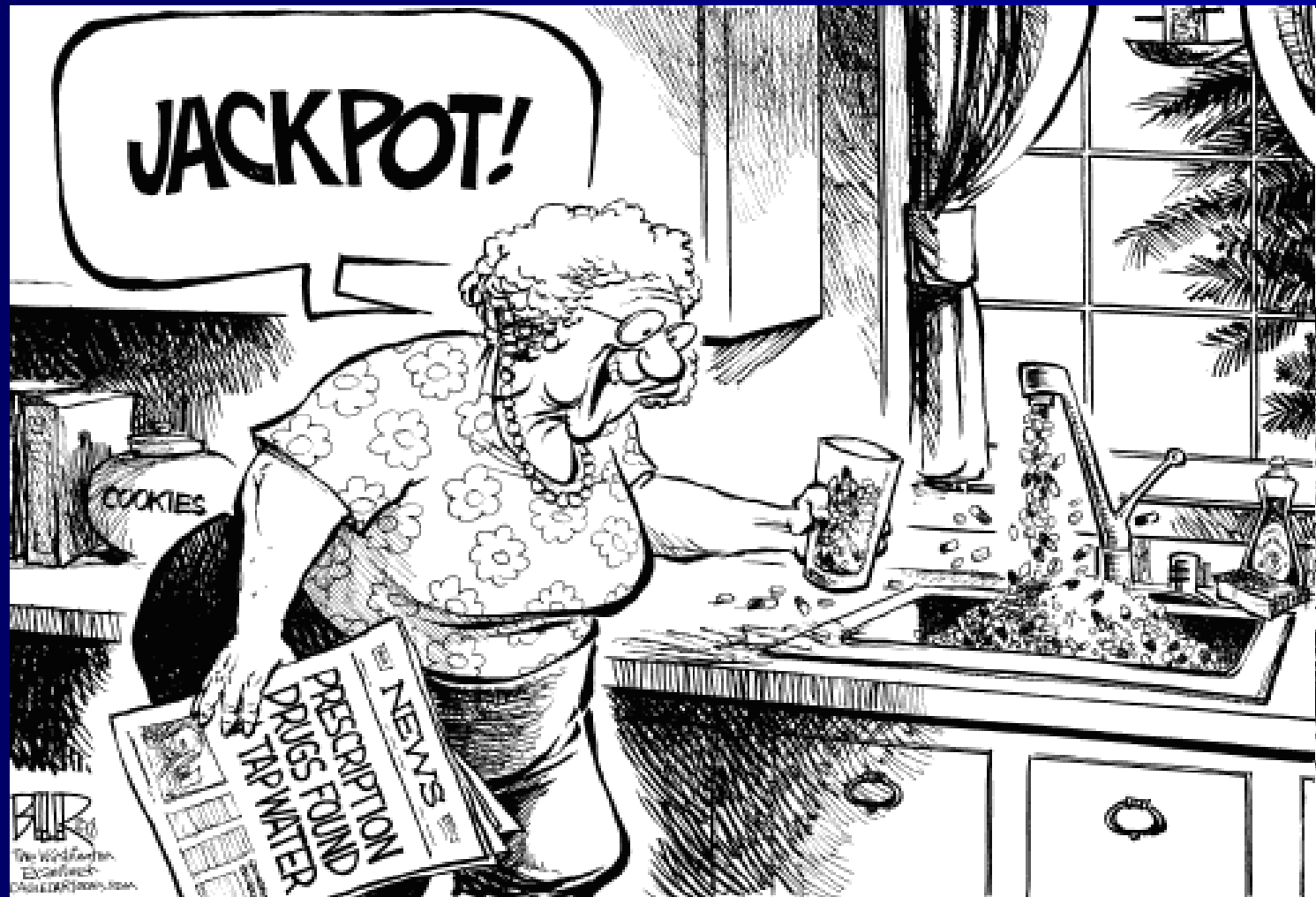
Are there drugs in the water?



Sampling for PPCPs

- NEORSD conducted a screening level sampling and analysis
 - 3 wastewater treatment plants
 - 5 drinking water treatment plants
 - 2 rivers
 - Lake Erie
- Total of 57 different substances analyzed

There are drugs in the water...



Caffeine

- Caffeine is ubiquitous
- A 5-oz cup of coffee contains 80 nanograms of caffeine
- The highest WWTP effluent caffeine concentration we found was 2580 ng/L
- At eight 8-oz glasses of effluent a day it would take **45** years to get as much caffeine as the cup of coffee

Ciproflaxin

- Broad-spectrum antibiotic
- WWTP Influent and Effluent
- Typical prescribed daily dose
= 500 mg
- Highest WWTP effluent concentration
= 191 ng/L
- **3,788 years**

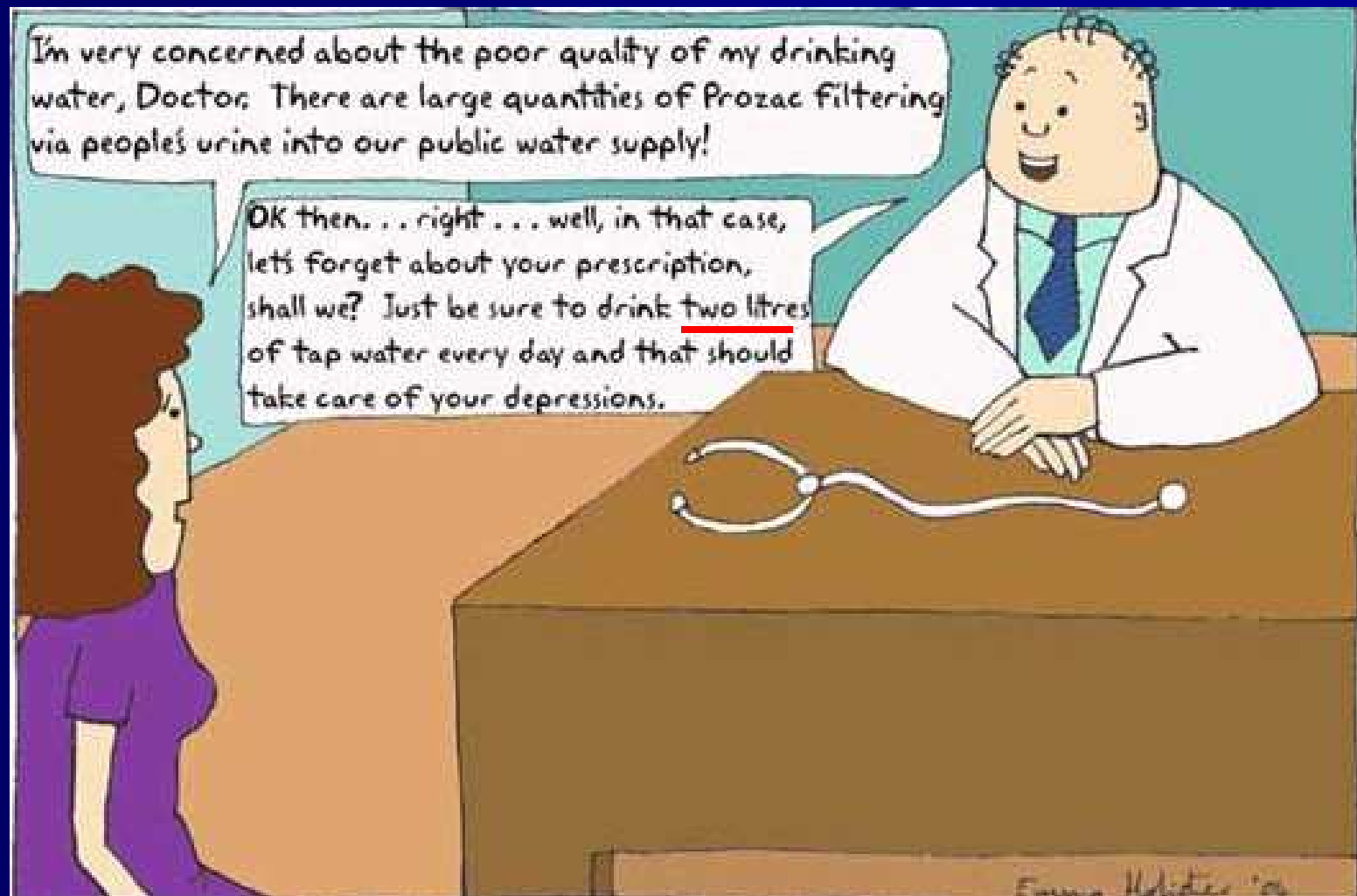
It might take more than three...



Diazepam

- Valium
- Typical prescribed dose = 4 mg/day
- WWTP Effluent
- Highest WWTP effluent concentration = 2 ng/L
- **2,894 years**

Two liters = not even close



Ibuprofen

- Anti-inflammatory
- Typical Daily Dose = 1,400 mg/d
- Highest detected concentration = 126 ng/L
- WWTP Effluent
- **16,077 years**

Just how much water would you have to drink?



Now on a serious note...

