

USGS Circular 1292

The Quality of Our Nation's Waters

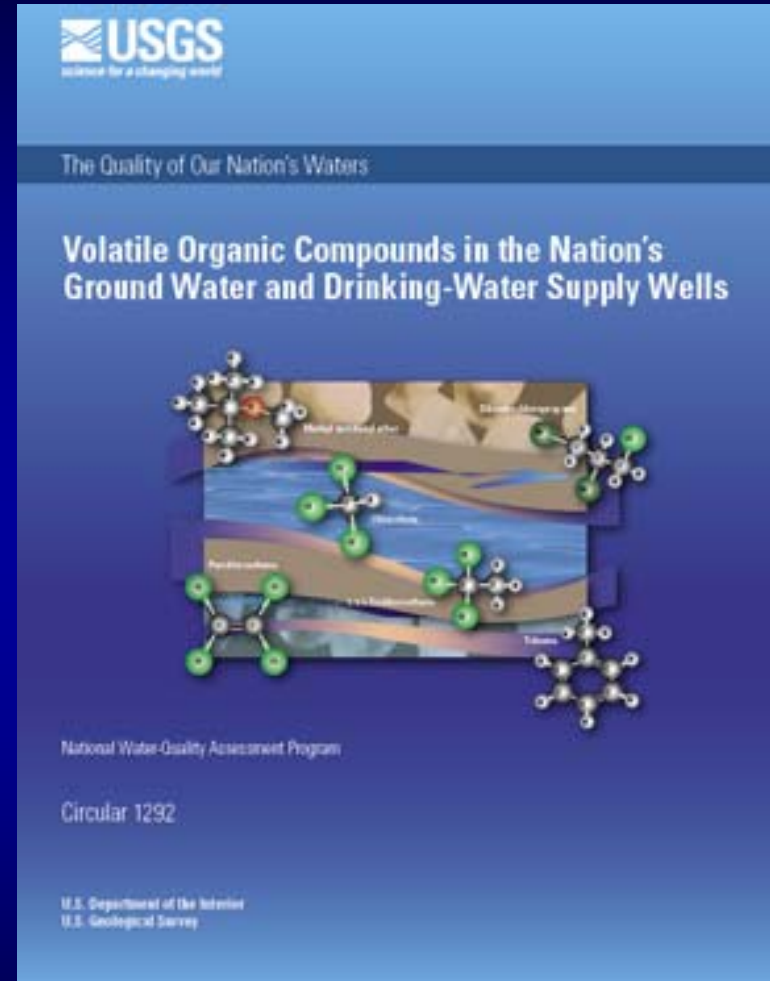
Volatile Organic Compounds in the Nation's Ground Water and Drinking-Water Supply Wells

By

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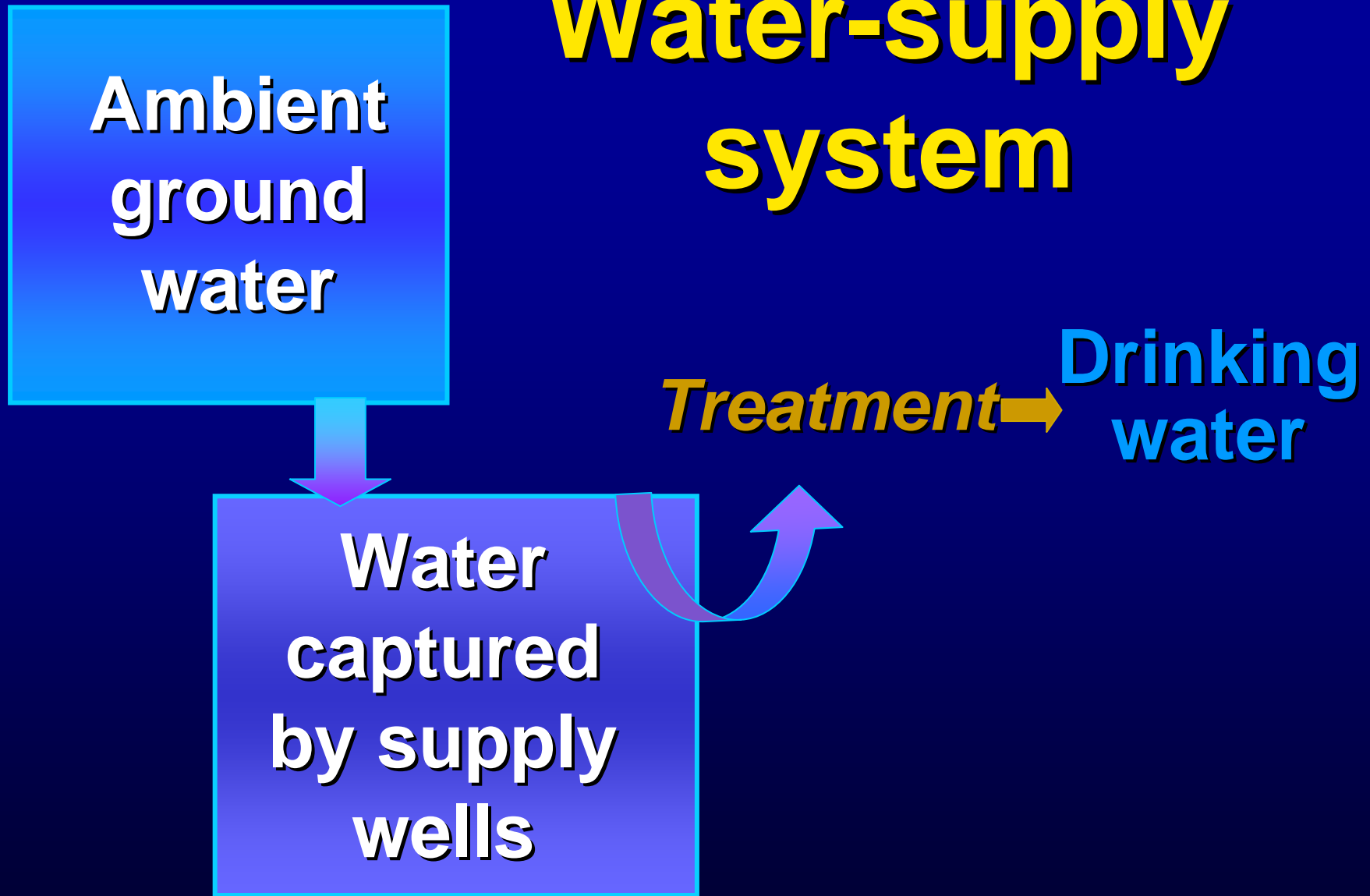


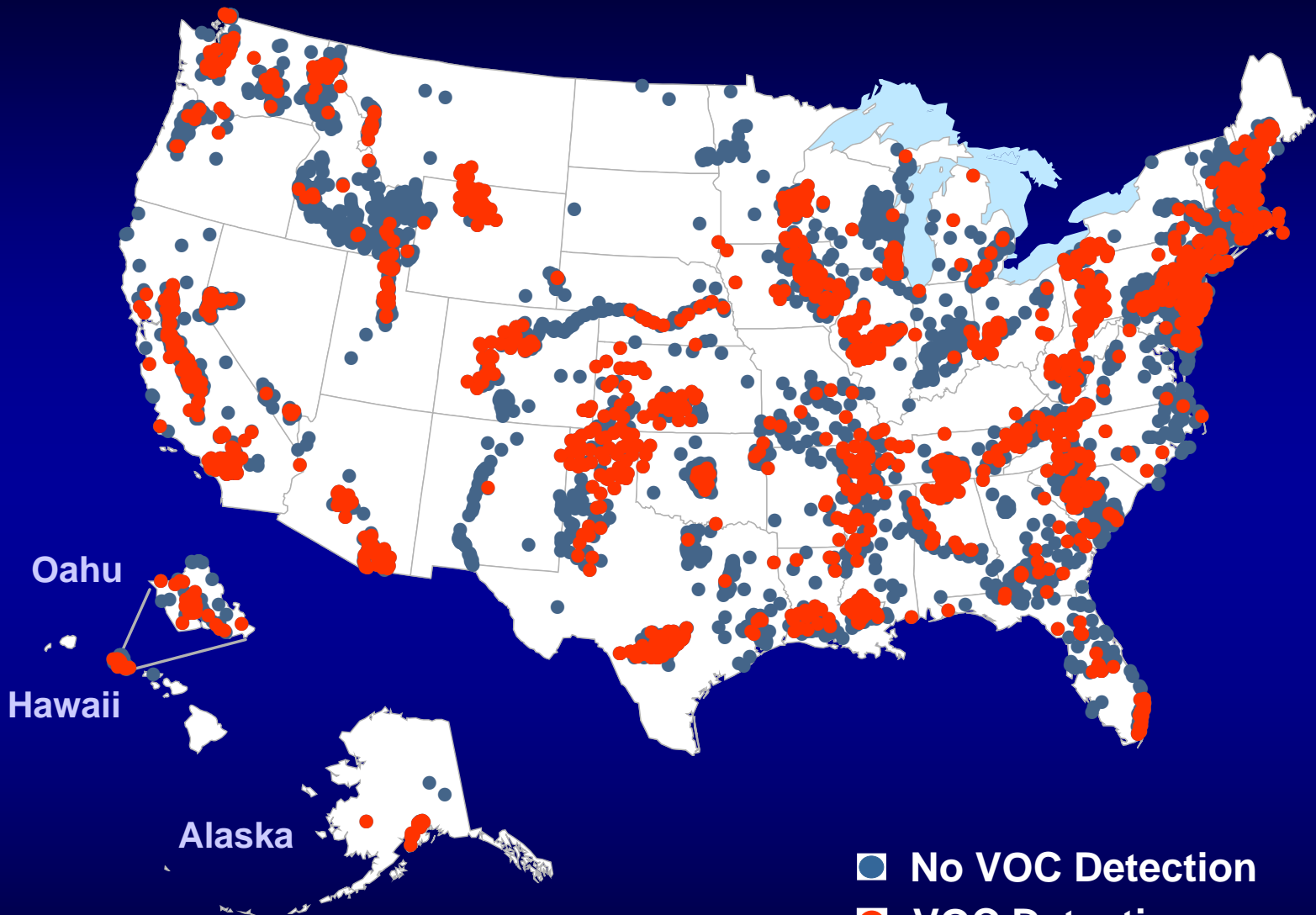
**Are VOCs present in the
Nation's ground water?**

**If so, are the VOC
concentrations of concern?**

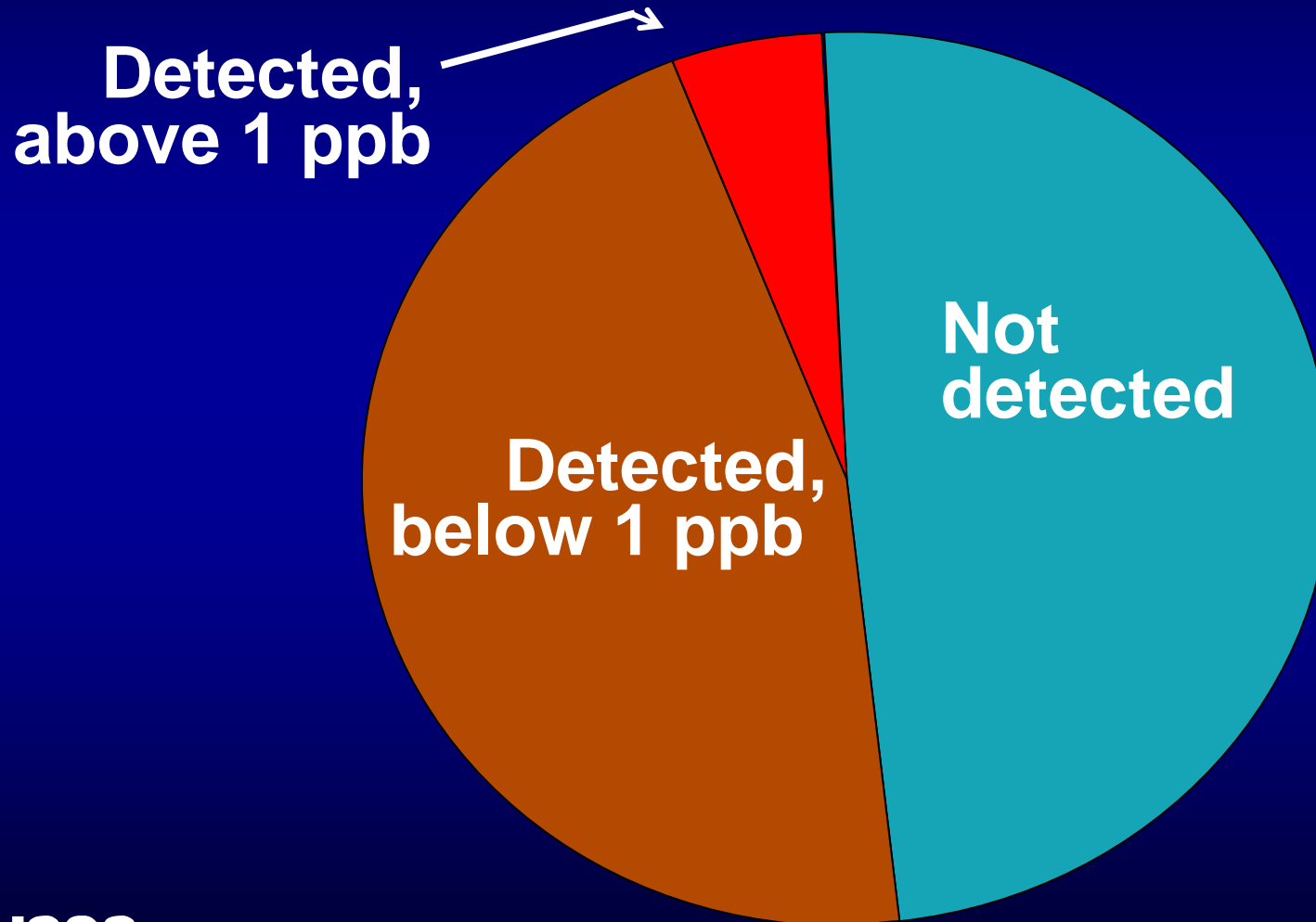
This was NOT a Drinking-Water Study

Water-supply system

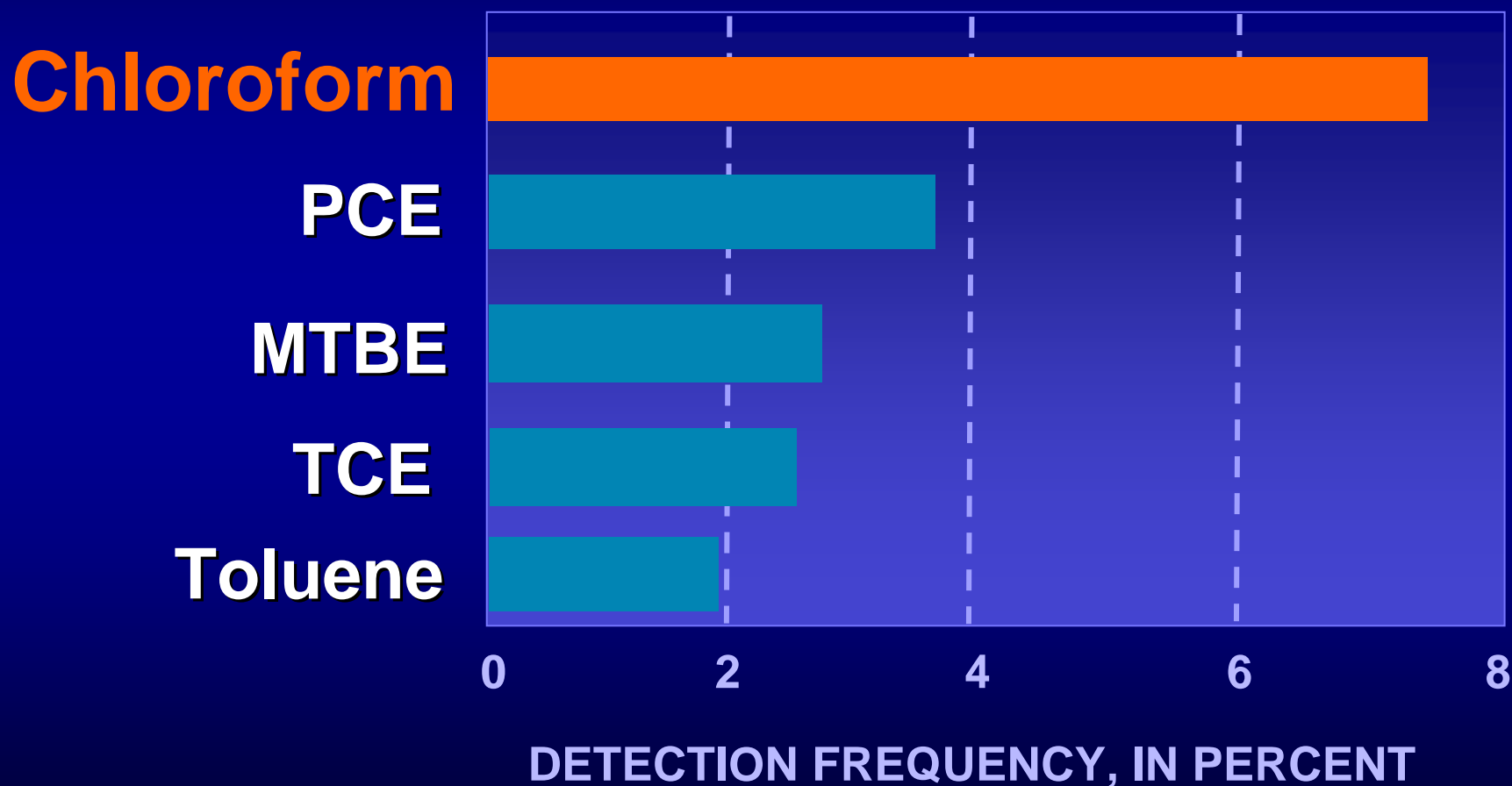




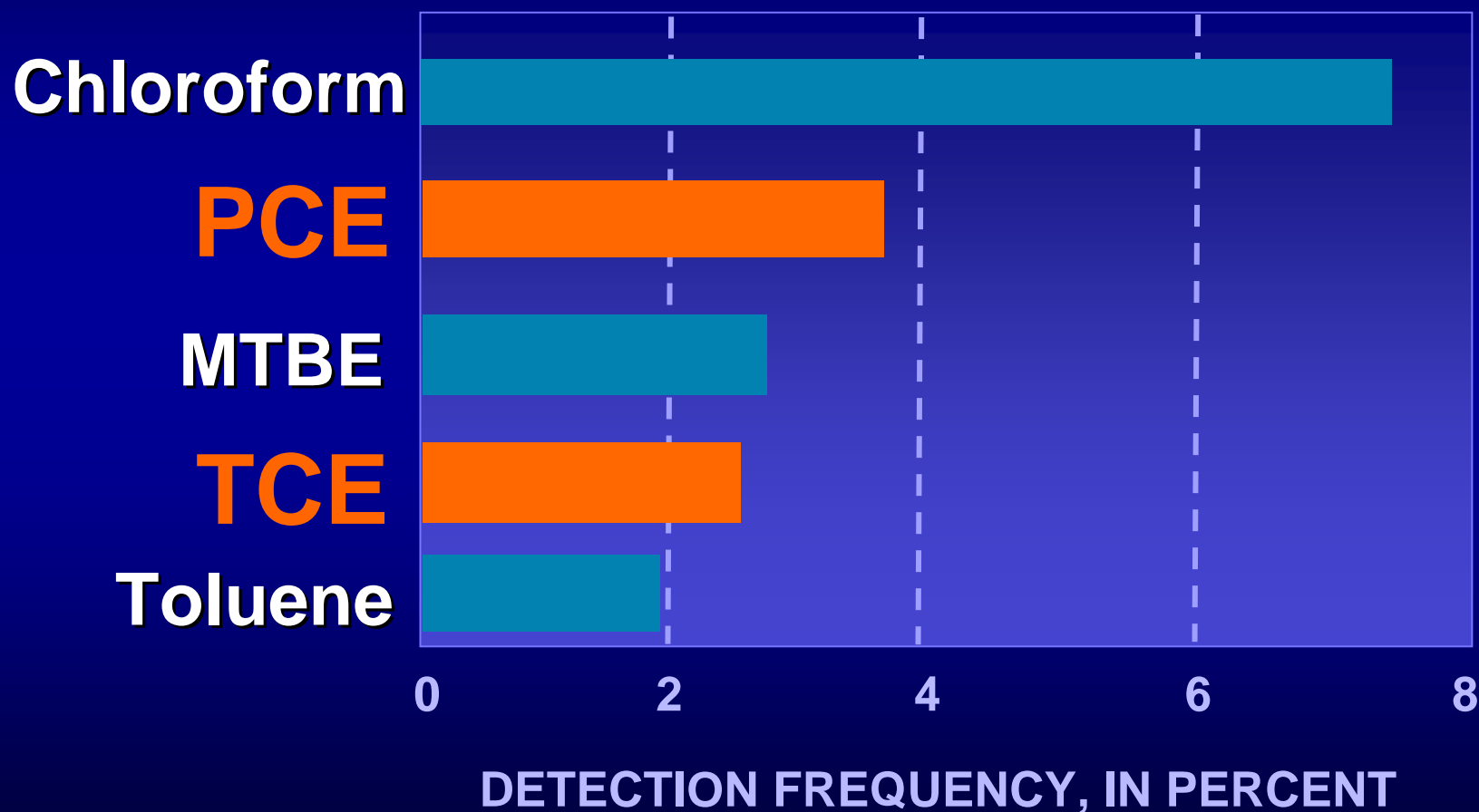
VOC concentrations in aquifers



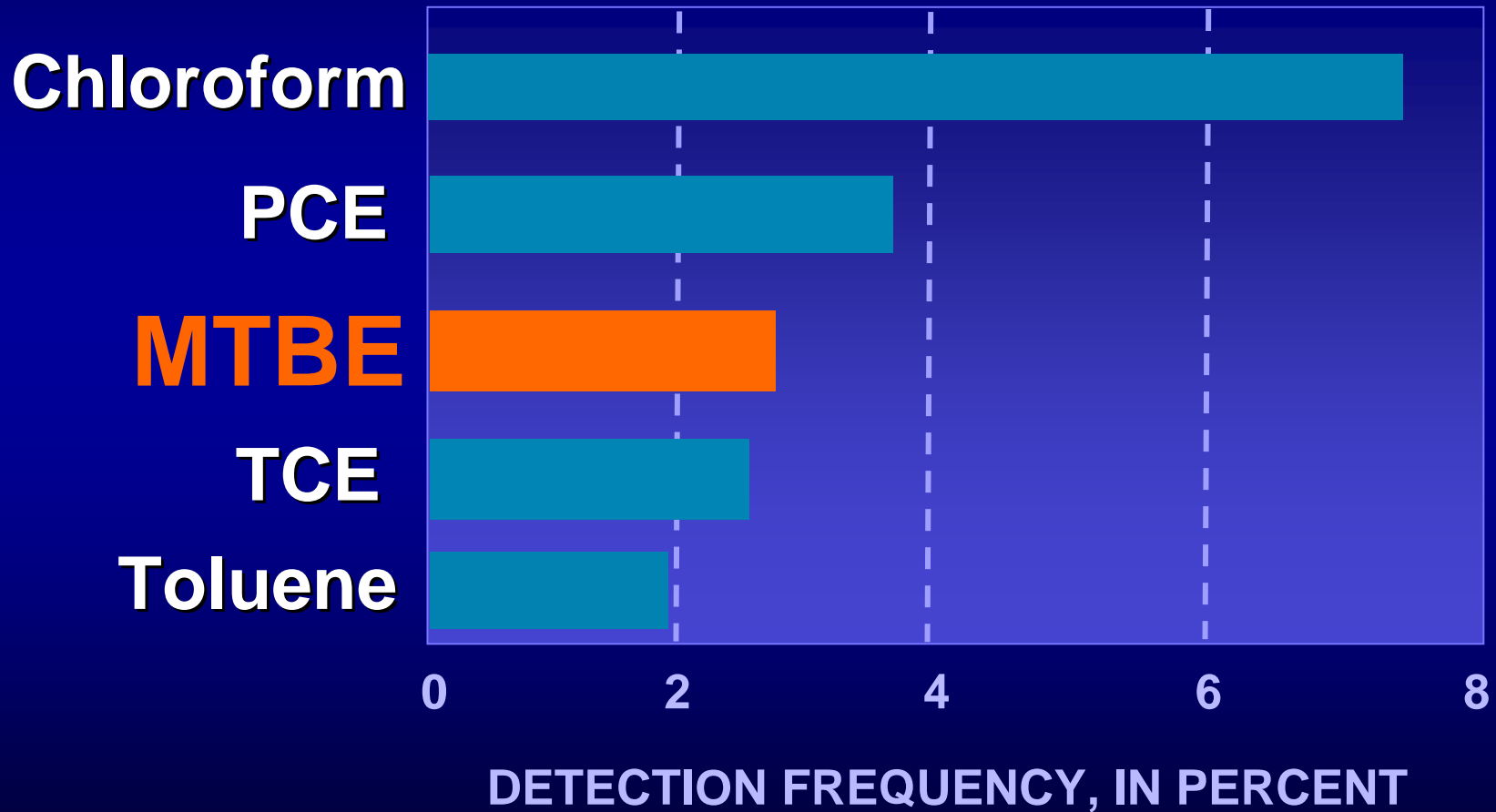
Chloroform was the most frequently detected VOC in aquifer samples



PCE and TCE were also frequently detected in aquifer samples



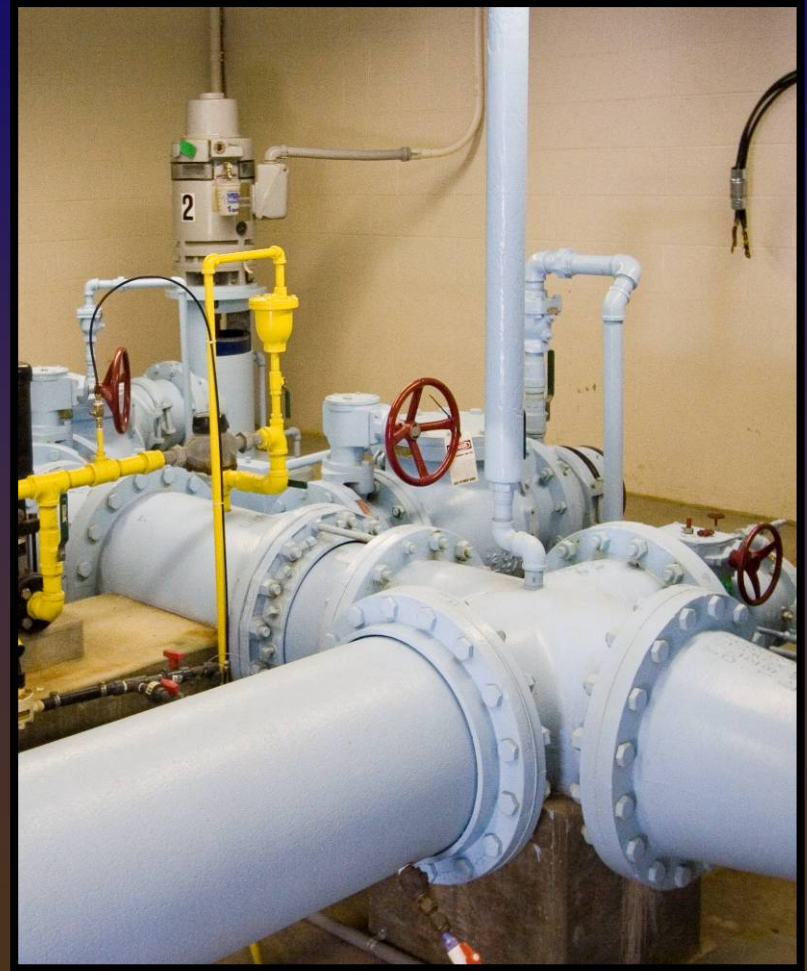
MTBE was the third most frequently detected VOC in aquifer samples

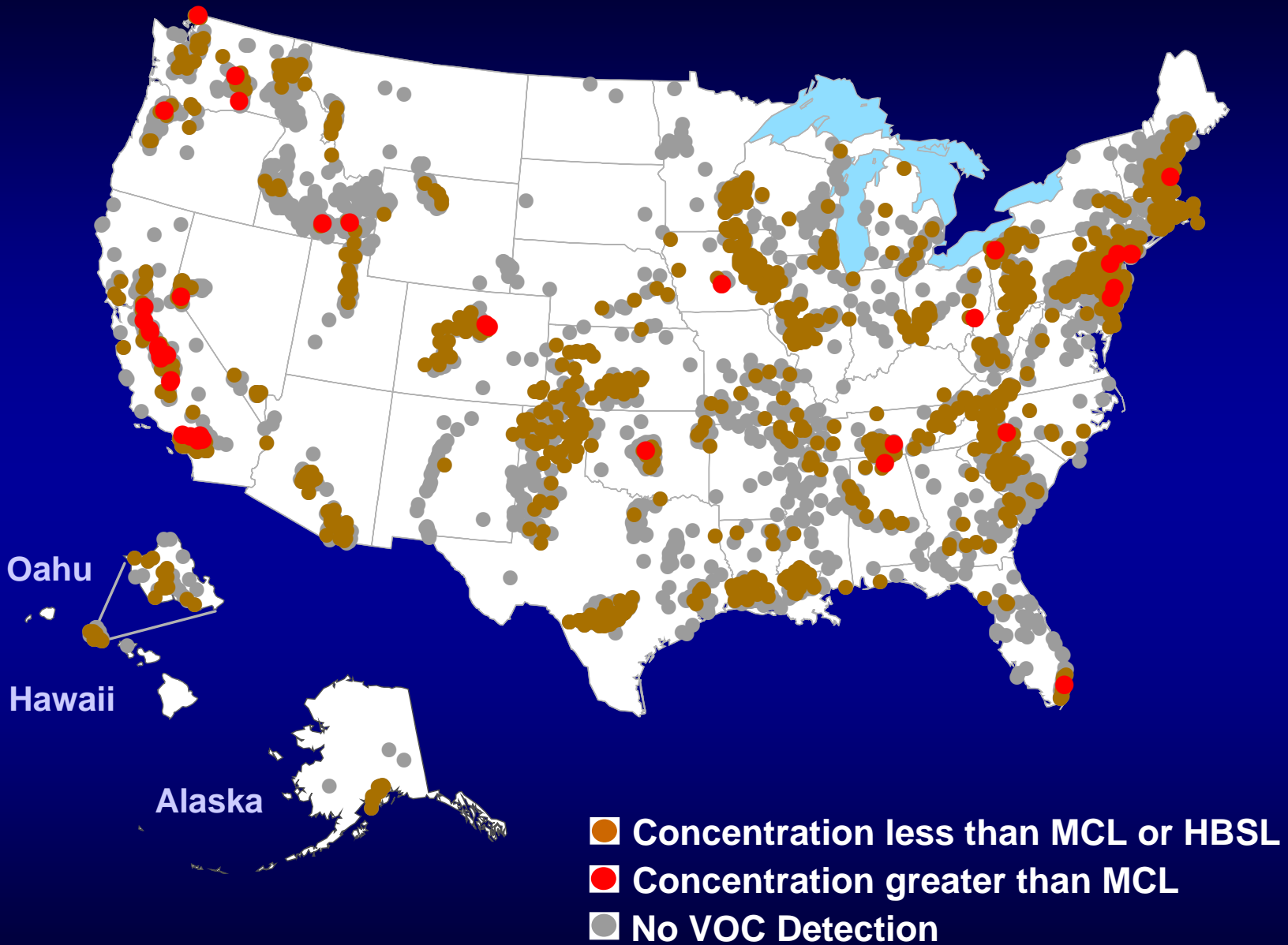


VOCs Detections and RCRA Facilities

- TCA, TEC, and Chloroform had positive associations with RCRA facilities
- Information on point sources within a 1-kilometer radius was collected for each well
- The study was not specifically designed to assess the occurrence of VOC from point sources

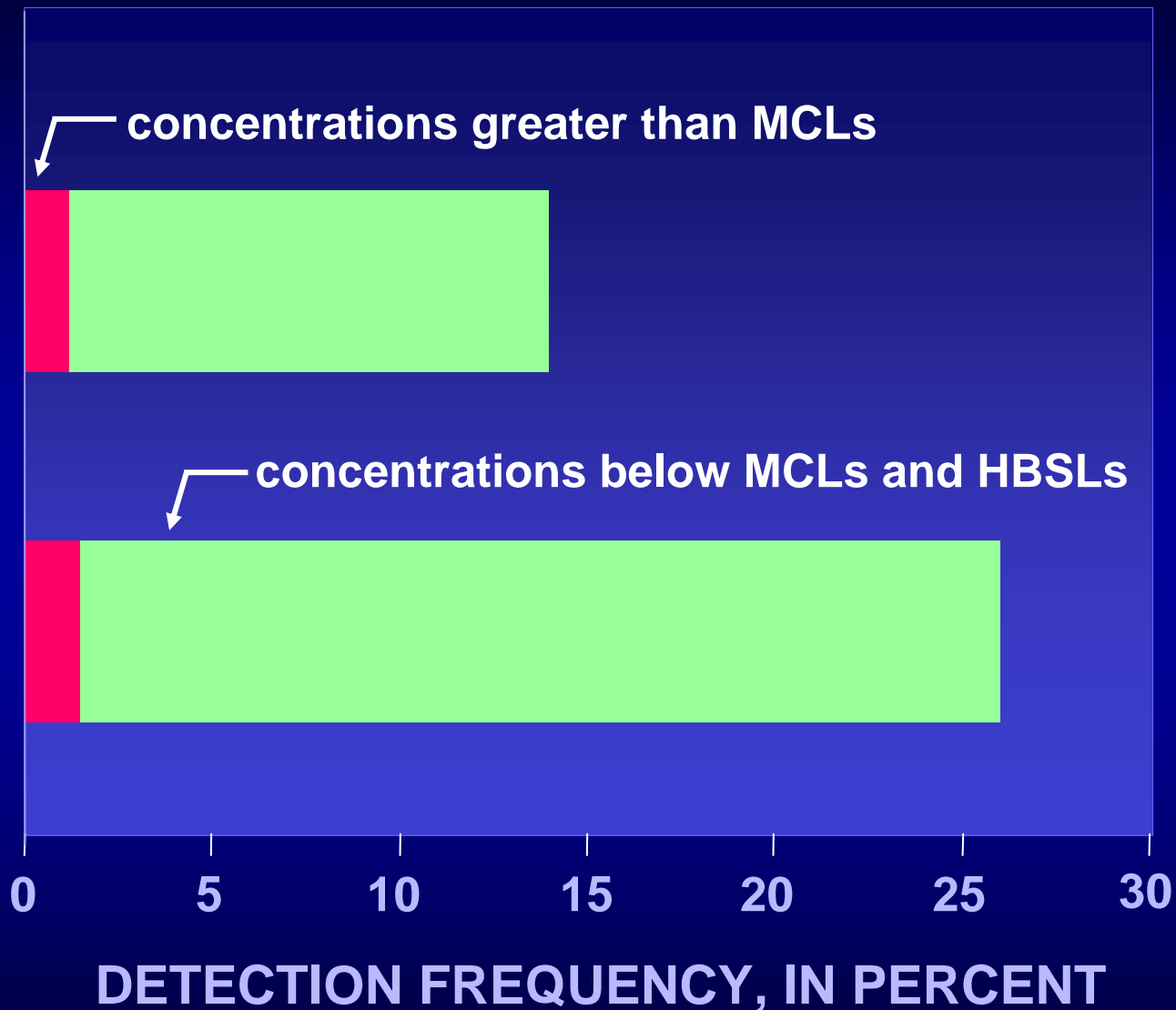
Domestic wells and Public wells





Domestic wells

Public wells



Summary

- **Widespread occurrence of VOCs**
- **Concentrations seldom of potential concern**
- **Large number of vulnerable aquifers**

For More Information

http://water.usgs.gov/nawqa/vocs/national_assessment/

VOCs with concentrations greater than MCLs

Group	Compound	Well type	
		Domestic	Public
Fumigants	DBCP	X	
	1,2-Dichloropropane	X	
	EDB	X	
Solvents	TCE	X	X
	PCE	X	X
	Methylene chloride		X
Chemical production	1,1-Dichloroethene	X	X
	Vinyl chloride		X

THMs in domestic and public wells

