

Nitrate Impacts to Public Water Supplies

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Office of Drinking Water



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

Mission

To protect the health
of the people of
Washington State
by ensuring safe
and reliable
drinking water.



Drinking Water Supplies in Washington State

Water Systems	Number of Systems	Residential Population	Regulation
Group A	4,100	6 million	Design standards, water quality and operational monitoring/ reporting (Department of Health)
Group B	13,000	130,000	Design approval for new and expanding systems (state and local)
Private wells	600,000	~1 million	Well construction (state and local)

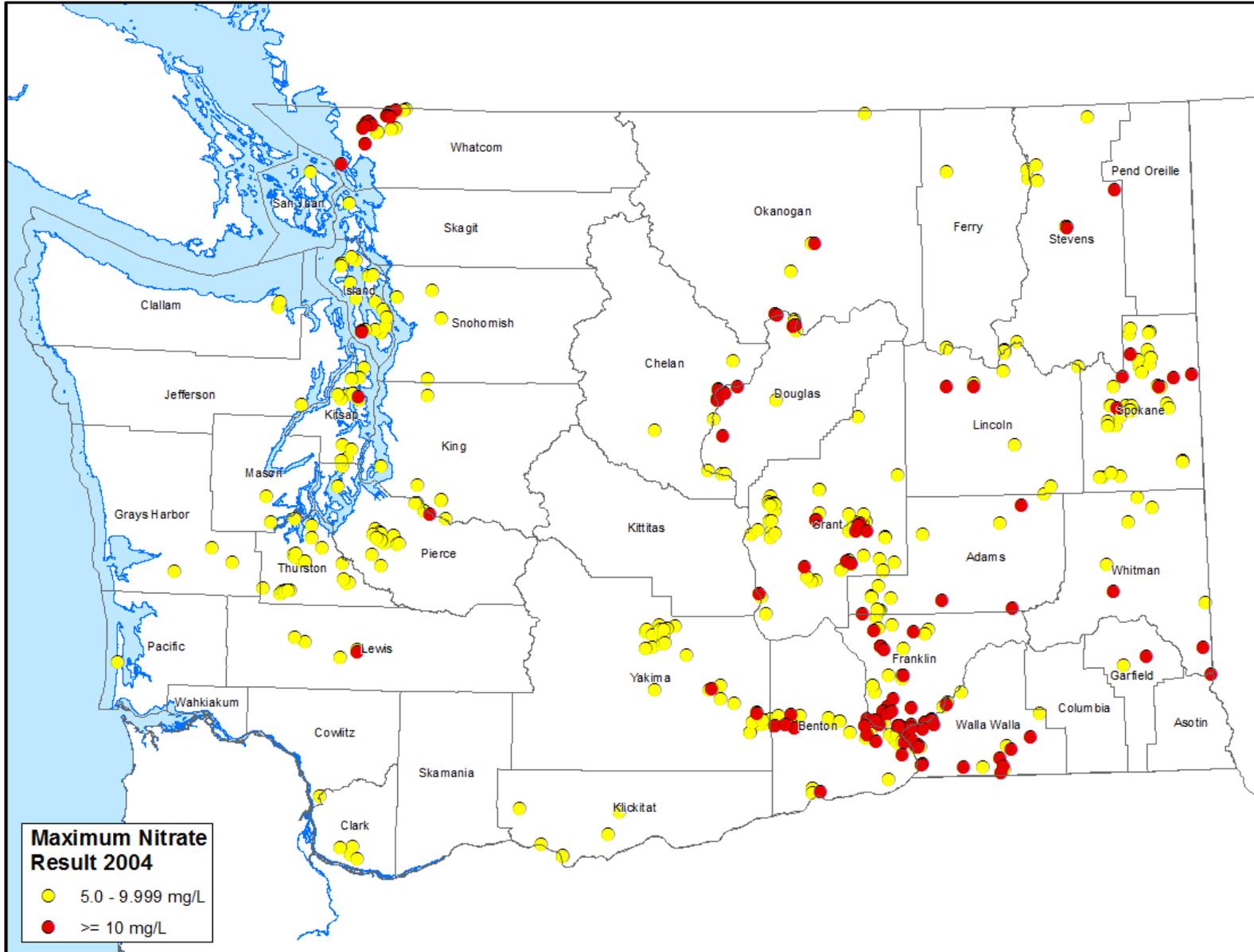
Nitrate Concerns for Drinking Water

- 💧 Nitrate is an acute contaminant
- 💧 Safe Drinking Water Act maximum contaminant level (MCL) =10 mg/L
- 💧 Impacts both public and private water supplies

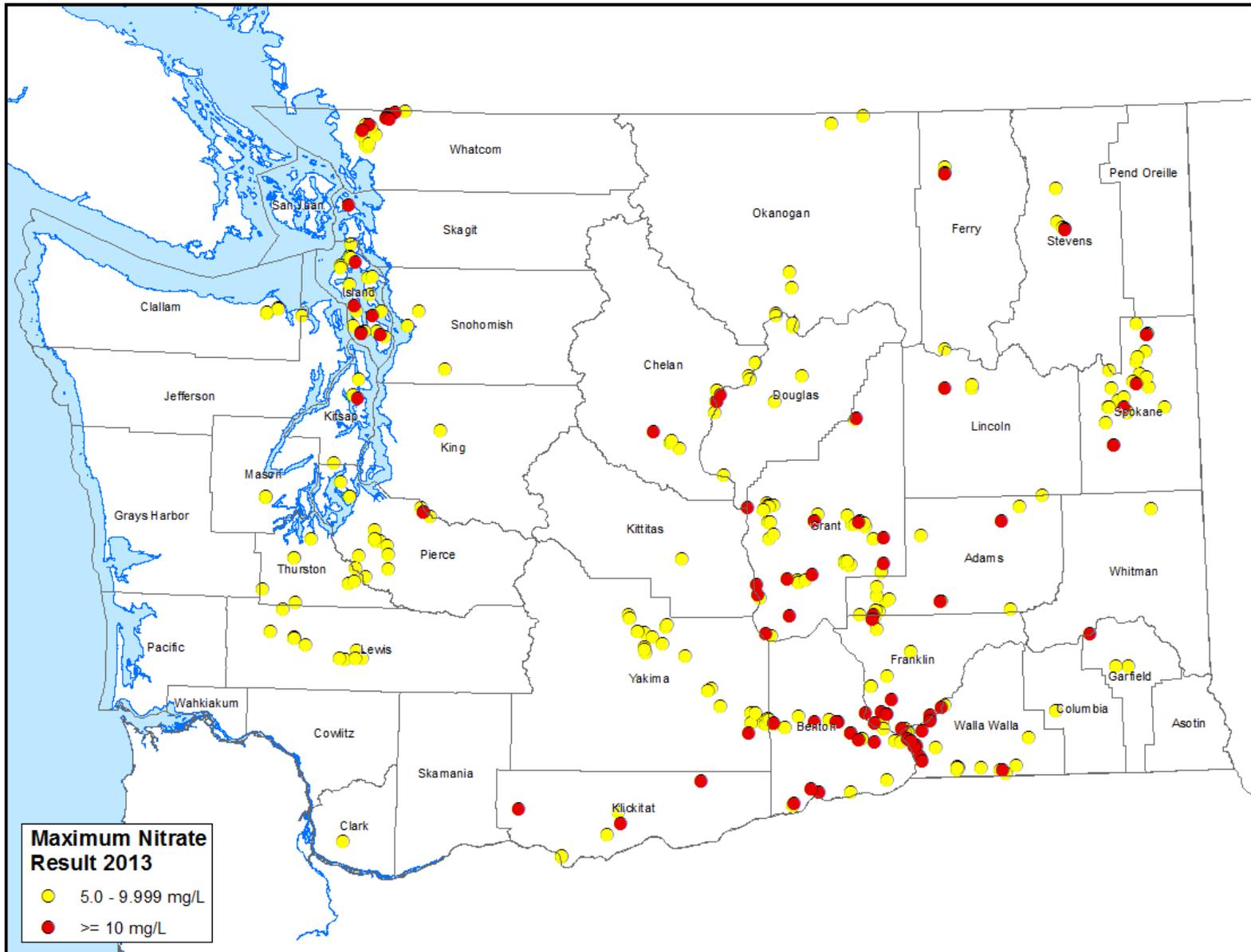
Public Water Supply Impacts

- 💧 Increased monitoring cost
- 💧 Source replacement if feasible
- 💧 Treatment and operation
- 💧 Public notification and education

Public Water System Max Nitrate Detections 2004



Public Water System Max Nitrate Detections 2013



Public Water System and Population Impacts

System Type/Nitrate Concentration	Number of Systems	Residential Population Impacted
Group A Greater than 10 mg/L	39	4,319
Group A Greater than 5mg/L but less than 10mg/L	178	161,717
Group B Greater than 10mg/L	28	209

Public Water Supply Impact Eastern Region Details

- 💧 45 systems actively treat
- 💧 3 had treatment failure in last 12 months
- 💧 11 additional systems under compliance
- 💧 16 under watch

Nitrate Impacts to Private Water

- 💧 No ongoing monitoring required
- 💧 Monitoring often limited to:
 - New well construction
 - Property transfer
 - Building permit
- 💧 Reduces property value
- 💧 Alternative water supply costs or treatment

Conclusions

- 💧 Water supplies are impacted
- 💧 Water systems bear burden for contamination they don't control
- 💧 Smaller systems are often impacted the most
- 💧 Very limited resources to respond to contamination

Questions?

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