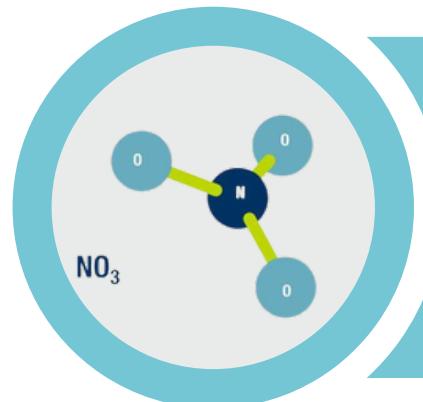


March 2024 Board of Health Spotlight

*Partnerships to Address Nitrate
Contamination*



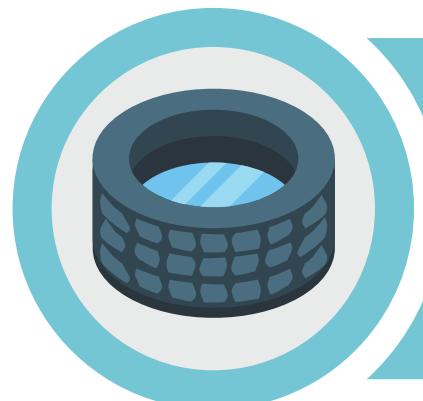
Nitrate in Well Water



Chemical that can leach into groundwater from human and animal sources

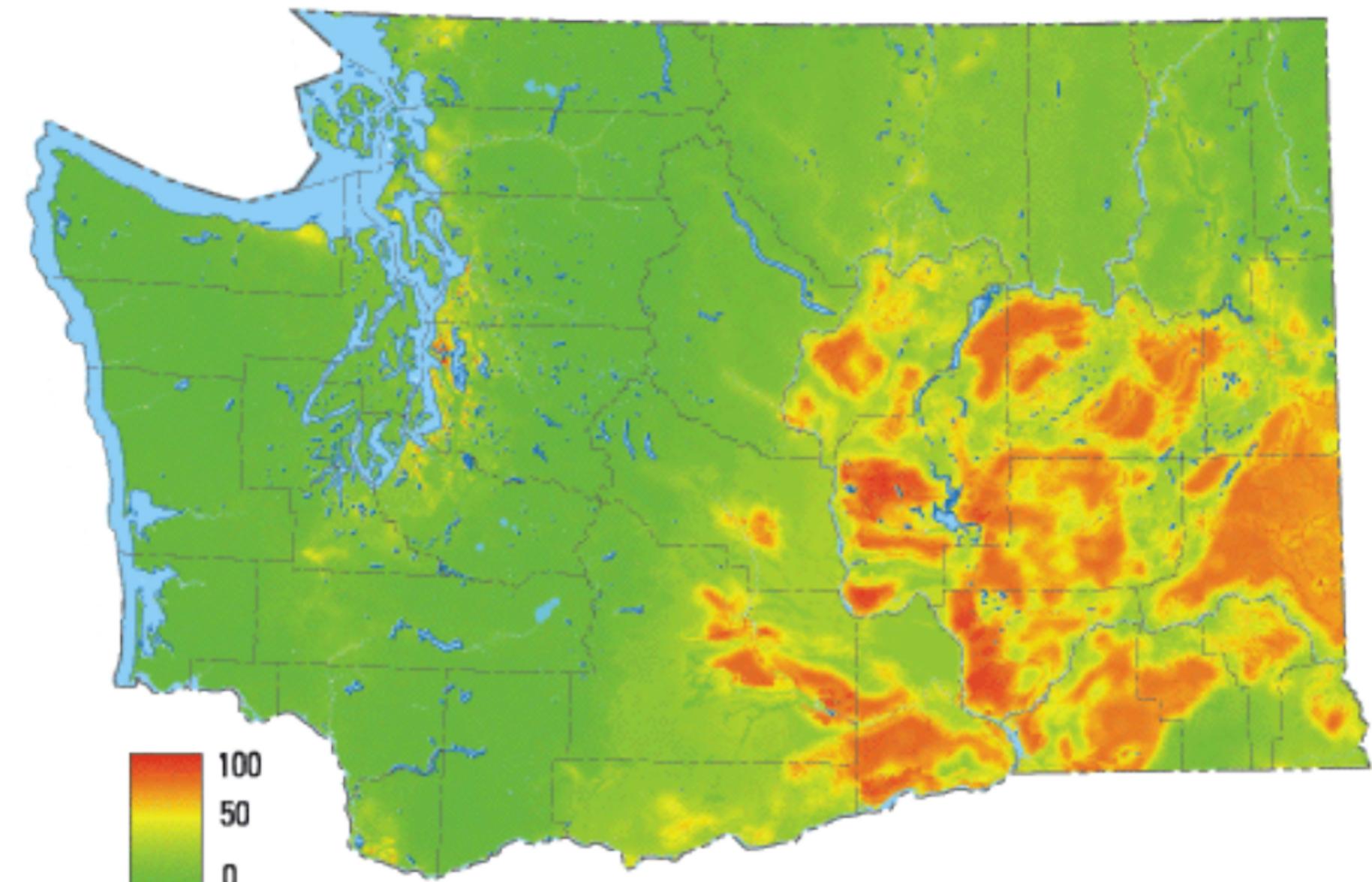


Drinking water with high levels of nitrate (>10mg/L) associated with health risks



24,000 Lower Yakima Valley residents rely on wells, with 2,000 at high risk of nitrate exposure

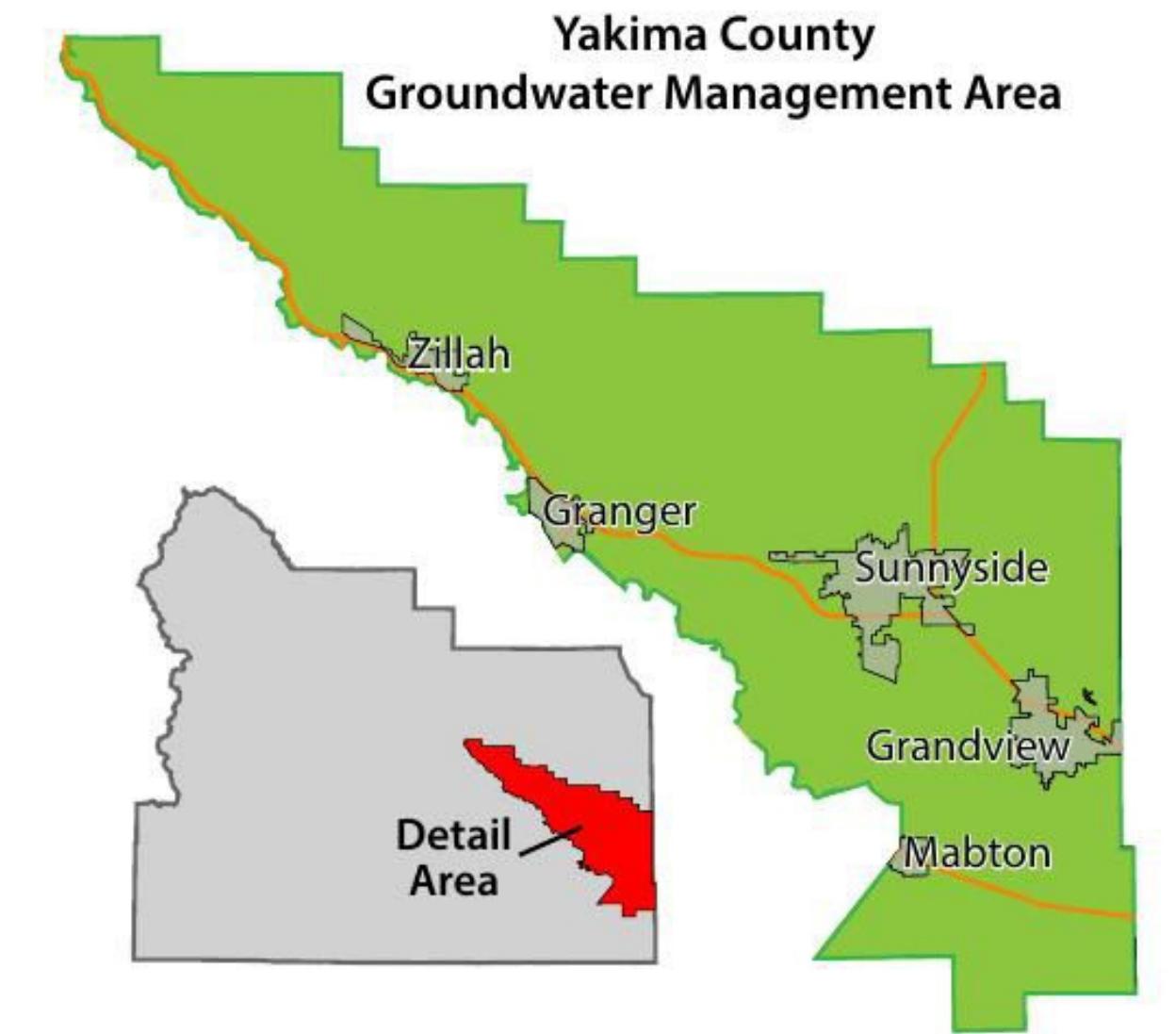
Vulnerability map of Washington for wells 145 feet deep



Probability that nitrate concentration will exceed 2 mg/L, in percent

Lower Yakima Valley (LYV) Groundwater Management Area

- LYV was designated as an Environmental Justice Community in 2009
- LYV GWMA established in 2012 to reduce nitrate concentrations in groundwater
- Overseen by an implementation committee, which includes local/state agencies and private entities



LYV Nitrate Initiatives

YHD's Role



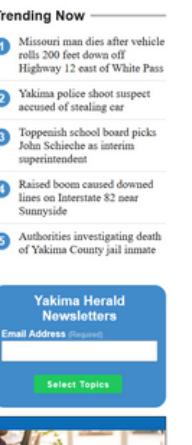
Pilot program to deliver free drinking water to some households in Lower Valley



Yakima Health District data suggests need for better information-sharing on groundwater contamination



Health district to survey Lower Valley residents about nitrate contamination in groundwater



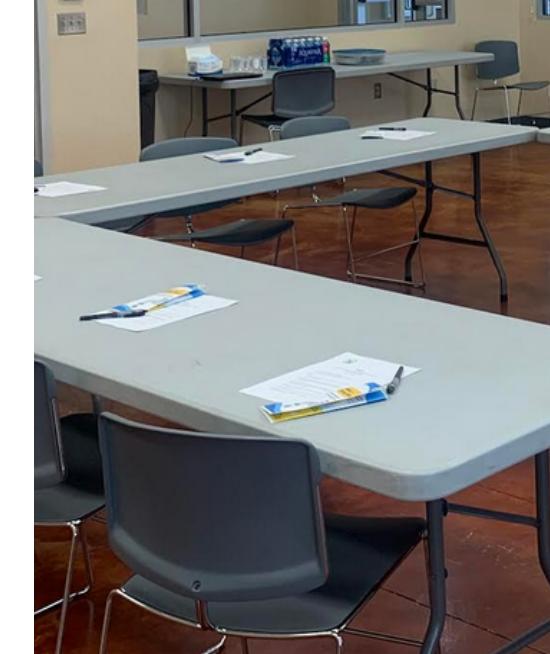
Engaging Community

- Focus groups
 - Community Stakeholders (10)
 - LYV residents (10)
- Surveys:
 - Pilot project households (35)
 - LYV well users (110)



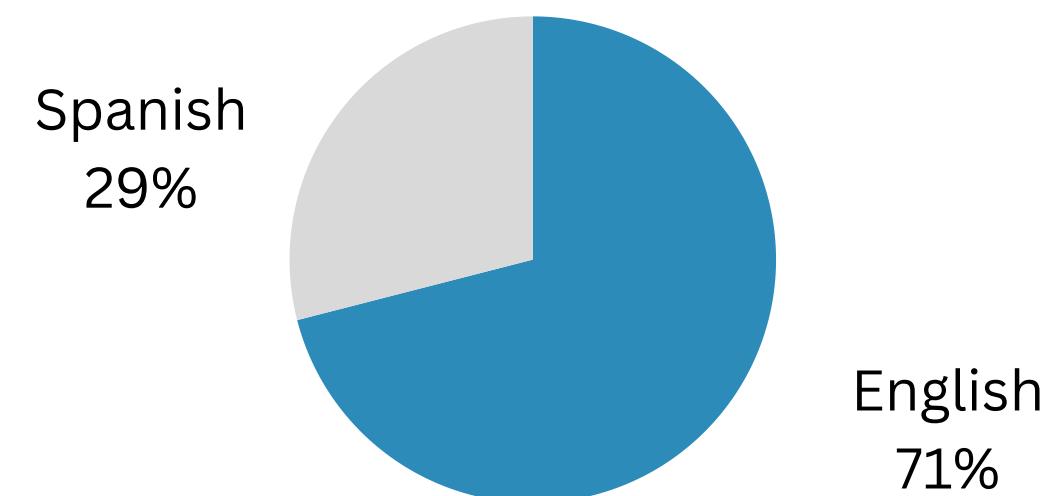
Q. 3

Specifically, what would you say is the level of awareness among private well-water users regarding nitrate levels?

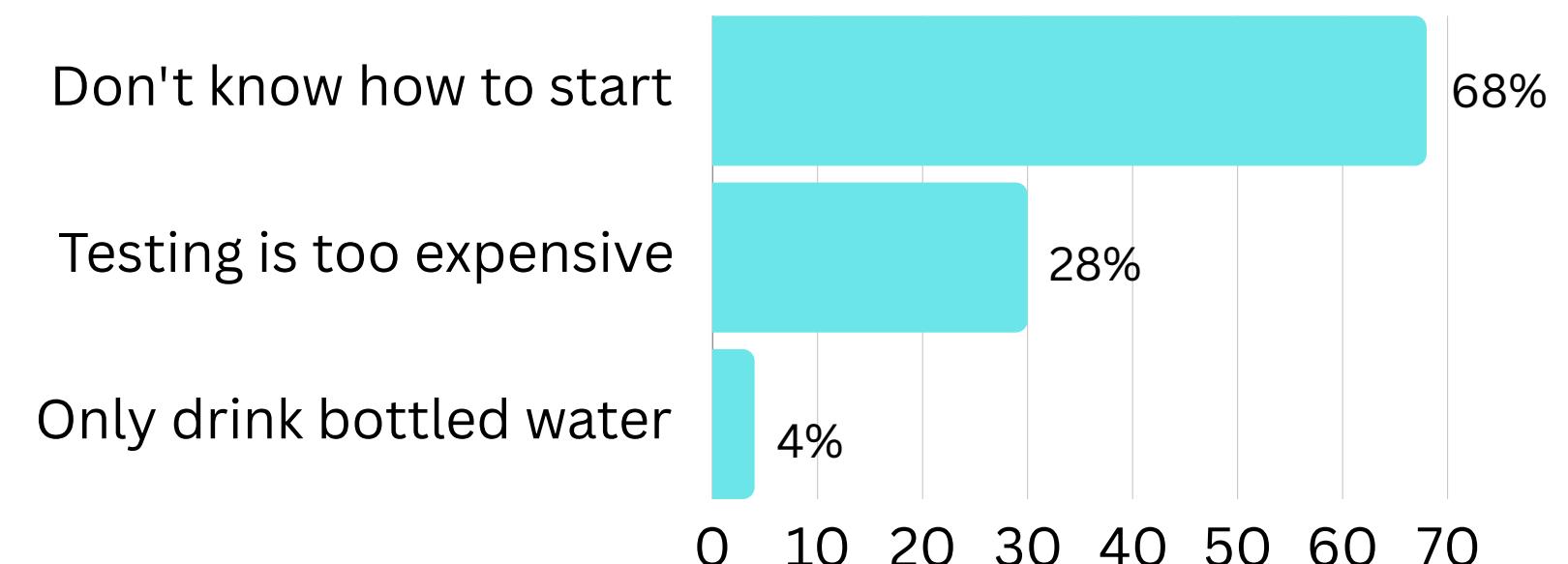


Overview of Well User Survey Results

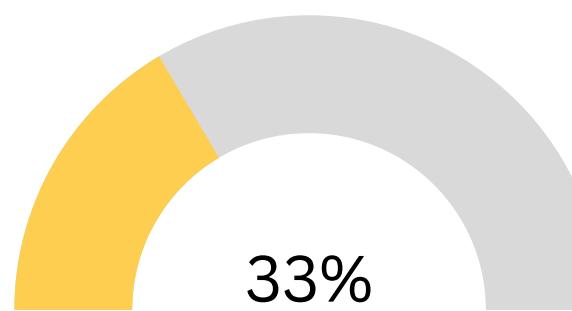
Language preference



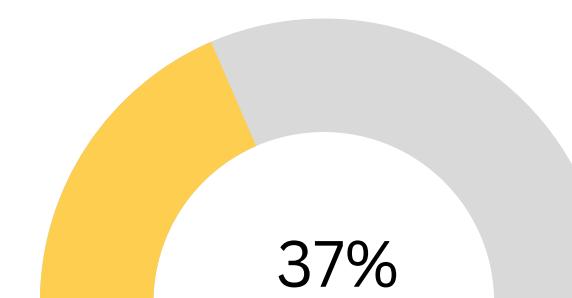
Reasons for not testing their water



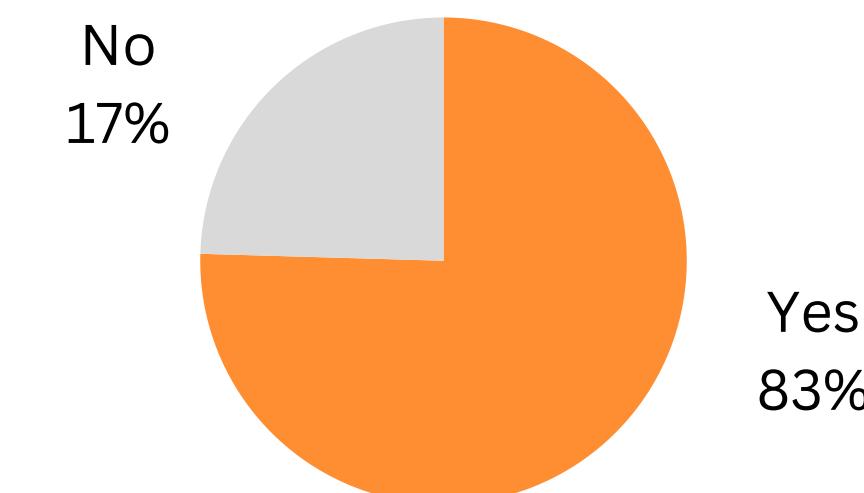
Knew what nitrate was



Self-tested their well water



Considered well water safety education important



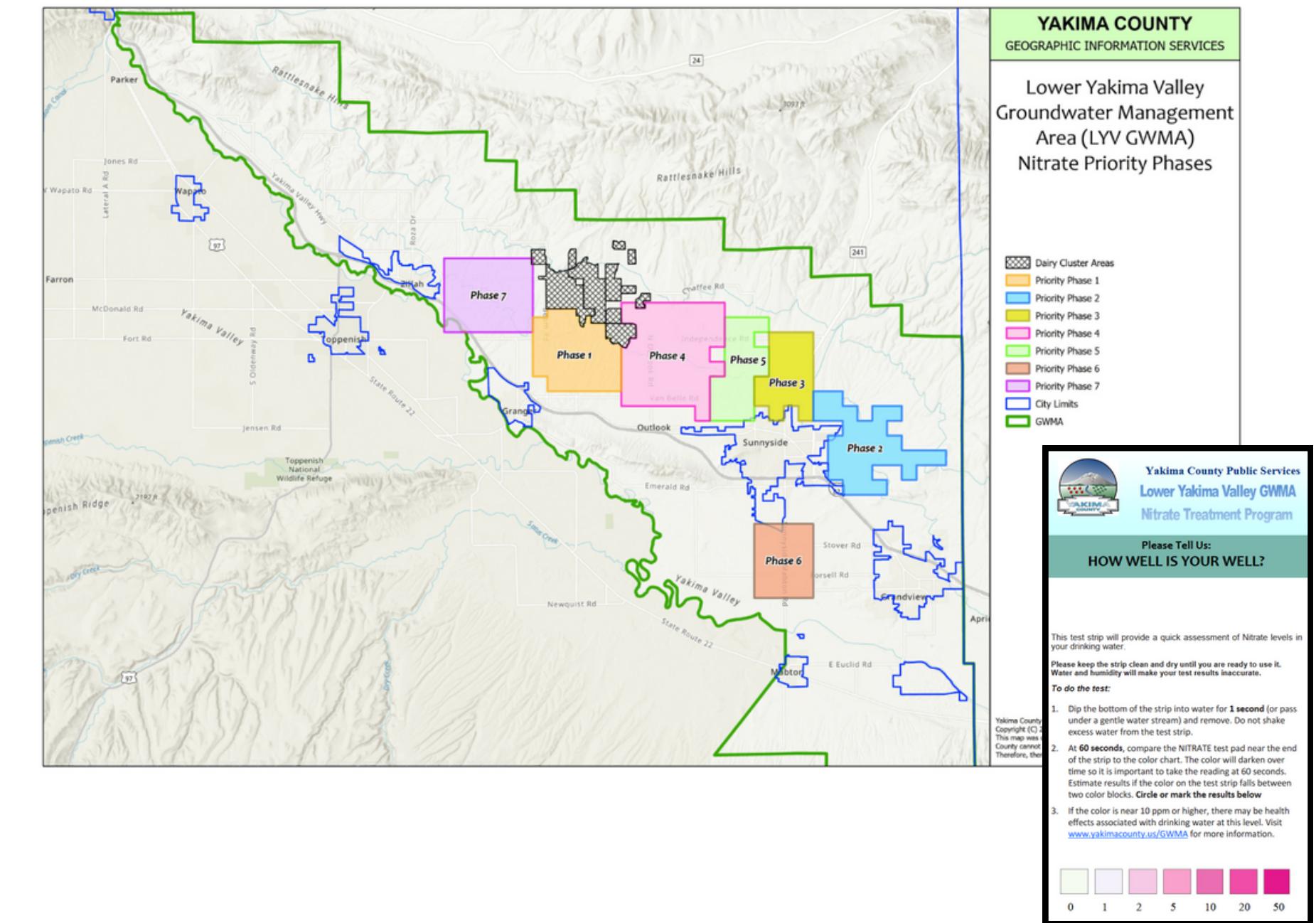
Safe Drinking Water Initiative

- Launched by Yakima County Public Services (YCPHS) in partnership with WADOH and YHD
- Program goals:
 - Identify impacted households
 - Provide education to residents
 - Offer free nitrate testing and safe drinking water
- Timeframe: January 2024 - June 2025



Program Enrollment

- YCPS conducting targeted outreach to priority areas within the LYV
- Program webpage and hotline available for community members
- Households are encouraged to test water using nitrate test strips, with high results directed to YHD for water sampling



Water Sampling

- EH Specialists conduct home visits to collect water samples for nitrate and coliform bacteria
- Perform well assessment surveys to evaluate well conditions and gather household information
- Provide education to households



Bottled Water Deliveries



Free limited bottled water deliveries available to households with lab results exceeding 10mg/L



YHD staff coordinate water deliveries with Culligan to meet households' water needs

Treatment Systems

- Reverse Osmosis (R-O) point-of-use systems will be offered to households beginning in April
- Program will cover installation and one year of maintenance
- Regular maintenance essential for system effectiveness



Reducing Nitrate in Your Well Water

Do not boil your water! This will increase the amount of nitrate in the water.
If your well water has more than 10 mg/L of nitrate, switch to bottled water while you take steps to reduce nitrate levels in your water.

Identify Potential Sources of Contamination

If possible, identify any sources around the home that could be contributing to the elevated nitrate levels in your well water. Some potential sources include:

- Overuse of nitrogen-based fertilizers
- High concentrations of animal manure near the well
- Septic systems too close to the well



Nitrate is more likely to enter wells that are damaged. If you notice any damages to your well, contact a licensed well contractor.

Install a Water Treatment System

There are three types of water treatment systems that can be installed to reduce or remove nitrate from water. However, these treatment systems may be expensive to install and require careful maintenance and monitoring.



Ion Exchange



Distillation



Reverse Osmosis



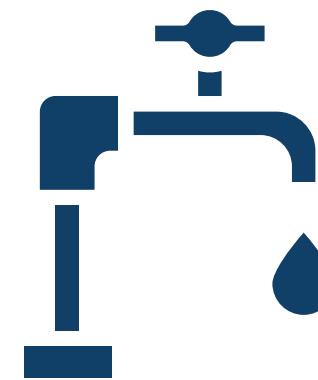
YHD Objectives



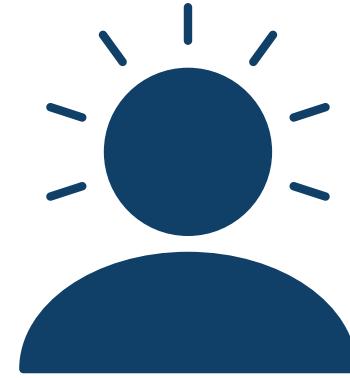
Conduct 665 household
water samples and surveys



Provide bottled water
to 200 households



Transition households to
treatment systems



Provide community
education

YHD Strategic Goals



Deliver mandated services



Develop a network of community partners invested in improving public health



Increase the effectiveness and efficiency of district services

Questions?