

# PRIVATE WELL STEWARDSHIP

Through Community Partnership

---

Kori VanDerGeest, MPH  
University of Washington  
August 9, 2019

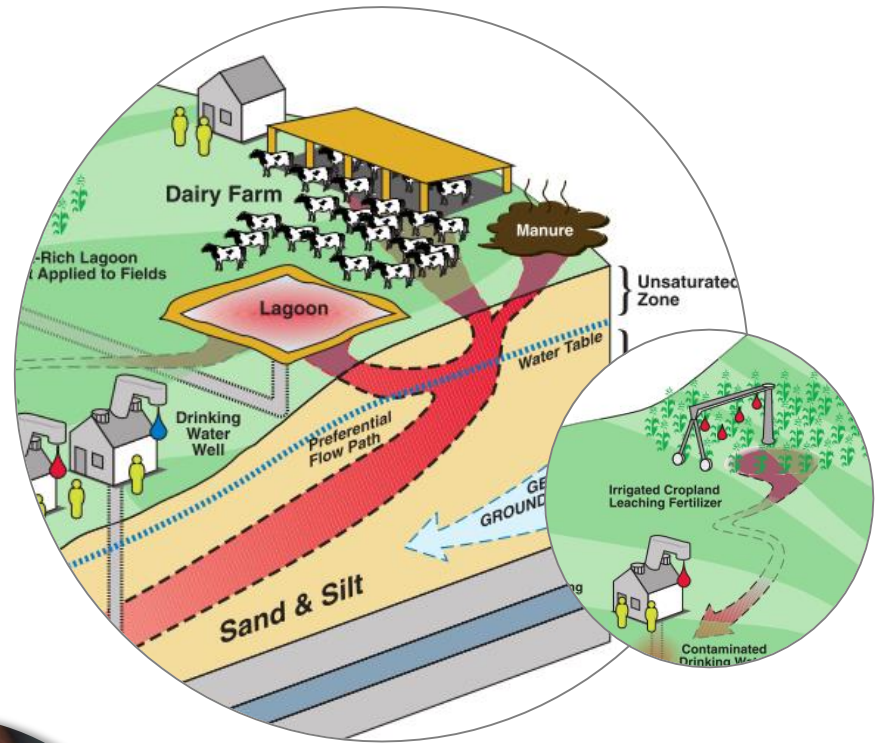


**PACIFIC NORTHWEST AGRICULTURAL  
SAFETY & HEALTH CENTER**

# INTRODUCTION



**Groundwater Contamination**



**Sources of Nitrate**



**Health Effects**



**A Community Ask**

# OUR STUDY

---



## **Aim**

- Identify barriers and facilitators of well stewardship among LYV families
- Develop educational materials that promote well stewardship



## **Focus Groups**

- Requested by community stakeholders
- Brings personal, social, & cultural knowledge into research



## **Recruitment**

- 37 adult well water users
- Recruited through radio & testing campaigns

# COLLABORATION



Task	UW	El Proyecto Bienestar	Latino Community Fund	Project Advisory Committee*
Project Planning & Advising	✓	✓	✓	✓
Recruitment	✓	✓	✓	
Data collection	✓	✓		
Data analysis	✓	✓		
Material development	✓	✓		✓
Report Writing	✓	✓		

\*The Project Advisory Committee is composed of local and state agencies and community organizations.

# RESULTS

---

## Barriers

Lack of actionable  
information

Cost & inconvenience

Lack of technical  
support

## Facilitators

Knowledge of sources

DIY home repair  
expertise

Commitment to family

# DISSEMINATION

## FAMILY COMMITMENT



### Is My Well Water Safe to Drink?

**What Could Be In My Well Water?**  
Nitrate and coliform bacteria are common contaminants in wells. They can seep into wells from septic tanks, manure, or fertilizers.

**These contaminants can be harmful to your family**—especially babies, pregnant women and older adults. High levels of nitrate in drinking water can cause blue baby syndrome. Without medical treatment, this illness can be fatal. Drinking well water with coliform bacteria can cause diarrhea and other illnesses.

**What Can I Do?**

1. **Test your well water.** Yakima Health District recommends that you or your landlord test every year.
2. **Read your results** to find out if you need to treat your water. Yakima Health District can help you understand your results.

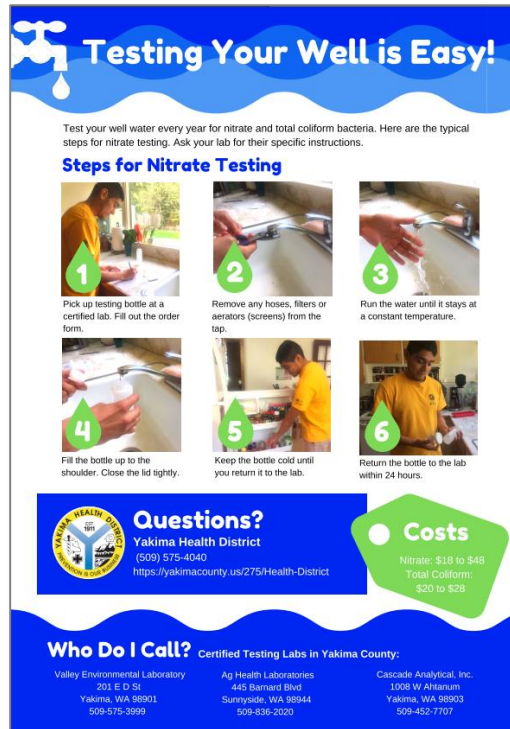
**If your results say you have coliform bacteria or high nitrate:**

3. Do not drink your well water. Bottled water is a safe option.
4. Treat your well water. Here are some of your options:
  - **Coliform bacteria:** Add bleach to your well. Call Yakima Health District to find out how much you should add. You can also boil your water for one minute to kill the bacteria.
  - **High nitrate:** Install a reverse osmosis system. This filter removes nitrate from water. Also, do NOT boil water with high nitrate. This will increase the nitrate level!

**You Can't See, Taste, or Smell**  
Nitrate or Coliform Bacteria

**Protect Your Family Test Your Well**

## ACTIONABLE INFO



### Testing Your Well is Easy!

Test your well water every year for nitrate and total coliform bacteria. Here are the typical steps for nitrate testing. Ask your lab for their specific instructions.

#### Steps for Nitrate Testing

1. Pick up testing bottle at a certified lab. Fill out the order form.
2. Remove any hoses, filters or aerators (screens) from the tap.
3. Run the water until it stays at a constant temperature.
4. Fill the bottle up to the shoulder. Close the lid tightly.
5. Keep the bottle cold until you return it to the lab.
6. Return the bottle to the lab within 24 hours.

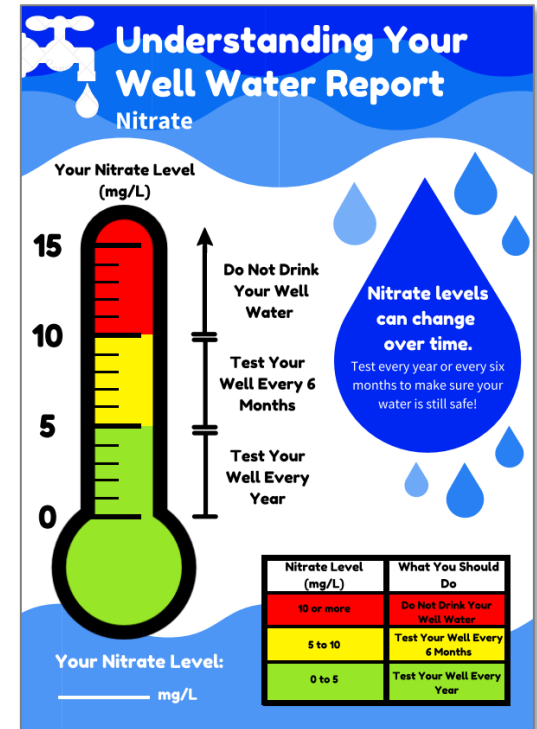
**Questions?**  
Yakima Health District  
(509) 575-4040  
<https://yakimacounty.us/275/Health-District>

**Costs**  
Nitrate: \$18 to \$48  
Total Coliform: \$20 to \$28

**Who Do I Call? Certified Testing Labs in Yakima County:**

Valley Environmental Laboratory 201 E D St Yakima, WA 98901 509-575-3999	Ag Health Laboratories 445 Barnard Blvd Sunnyside, WA 98944 509-836-2020	Cascade Analytical, Inc. 1008 W Altavum Yakima, WA 98903 509-452-7707
---	---	--

## TECHINICAL SUPPORT



### Understanding Your Well Water Report

#### Nitrate

**Your Nitrate Level (mg/L)**

15  
10  
5  
0

**Do Not Drink Your Well Water**

**Test Your Well Every 6 Months**

**Test Your Well Every Year**

**Nitrate levels can change over time.**  
Test every year or every six months to make sure your water is still safe!

Nitrate Level (mg/L)	What You Should Do
10 or more	Do Not Drink Your Well Water
5 to 10	Test Your Well Every 6 Months
0 to 5	Test Your Well Every Year

**Your Nitrate Level:** \_\_\_\_\_ mg/L



# THANK YOU

---

## Community Stakeholders

Study Participants

Project Advisory Committee

Elizabeth Torres, El Proyecto Bienestar

Micaela Razo, Latino Community Fund of Washington

Isabel Reyes-Paz, Yakima Valley Farm Workers Clinic

## University of Washington

Catherine Karr, Faculty

Linda Ko, Faculty

Elena Austin, Research scientist

Dennise Drury, MPH student

Lela Cooper, Undergraduate

Daira Melendez, MPH student

Pacific Northwest Agricultural Safety & Health Center (PNASH) Staff

## Funding Sources

PNASH CDC-NIOSH Cooperative Agreement #6 U54OH007544

Pacific Northwest Center for Public Health Practice

Department of Environmental & Occupational Health Sciences



# IMAGE SOURCES

---

In order of appearance:

“Hidden Wells, Dirty Water.” Lower Yakima Valley Groundwater Management Area. <http://www.yakimaco.us/GWMA/background.php>

“Adorable Affection Baby 826734.” Adobe Stock. <https://stock.adobe.com/>

“Conceptual Site Model for Lower Yakima Valley Project.” US EPA. <https://www.yakimacounty.us/DocumentCenter/View/13591/EPA2013a-Yakima-groundwater-nitrate-and-sources>

“El Proyecto Bienestar Logo.” Pacific Northwest Agricultural Safety and Health Center. <http://deohs.washington.edu/pnash/pnash/epb>

Target icon created by Ellen Marias from Noun Project

Talking bubble icon 1516481 created by icon 54 from Noun Project

People icon 1393005 created by Shastry from Noun Project

Baby boy drinking water with a baby bottle. BEK86R. By Hola Images / Alamy Stock Photo