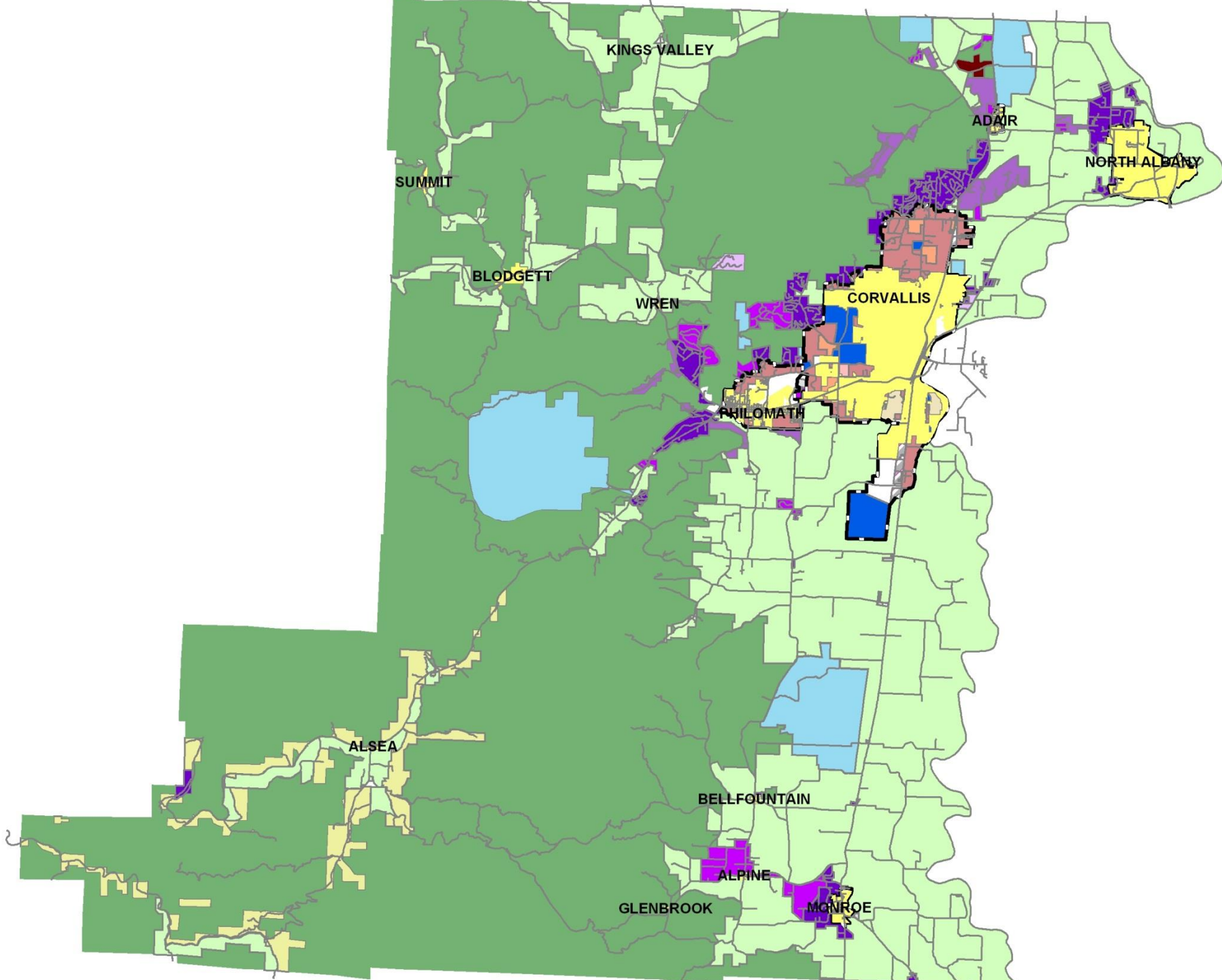


# Water Supply and Rural Development



Greg Verret

Community Development Director



# Rural Water Supply

## Inside City Limits:

- municipal water supply

## Outside City Limits:

- a few municipal connections
- some public water systems
- most development is served by individual or shared wells

# Development Using Groundwater

## Rural Infill

- 2-3 parcel partitions
- existing vacant lot

## New Subdivisions

- Avg. 1 per year
- 8 to 30 lots (typically)

# Development Using Groundwater

## Potential for More?

- Resource land dwellings
- Zoning changes
- Measure 37/Measure 49
- Rural “gentrification”

# Concerns

- Water availability a commonly expressed concern.
- Wells losing yield or going dry, seasonally or over time.
- Past rules didn't address long-term supply, effect on neighboring users.
- Rural use can vary greatly
  - e.g. 5 acres of manicured lawn
- Variation between aquifers:
  - High-yield alluvial
  - Hit-or-miss bedrock

# Concerns

State oversight is limited

- Domestic well exempt from state rules if:
  - using <15,000 gallons/day
  - irrigating up to ½-acre

Interference

- difficult to demonstrate
- older well must be deepened if possible

# Benton County's Program

- Amended Comprehensive Plan and Development Code in 2007
- Regulate land uses, not wells or water use



# Benton County's Program

## Water Supply for Development *Quantity*

- availability (adequate water)
- long-term aquifer capacity
- non-interference

# Addressing Quantity

- *Building permit for a house:*
  - well pump test to meet flow standards (availability);
- *Small-scale land division:*
  - a well pump test with monitoring of off-site wells to address availability and interference;
- *Large-scale land division:*
  - a full hydrogeologic study to address availability, interference, and long-term aquifer capacity.

# Benton County Development Code

	Aquifer Characteristics**					
	Bedrock			Alluvium		
	Minor Pump Test <i>99.845(3)</i>	Major Pump Test <i>99.845(5)</i>	Hydro-geologic Study <i>99.850</i>	Minor Pump Test <i>99.845(3)</i>	Major Pump Test <i>99.845(5)</i>	Hydro-geologic Study <i>99.850</i>
<b>Partition</b> with an average parcel size:						
less than 5 acres		X			X	
5 acres to less than 10 acres		X			X	
10 acres or larger	X			X		
<b>Subdivision or Series Partition*</b> with an average parcel size:						
less than 5 acres			X			X
5 acres to less than 10 acres			X		X	
10 acres to less than 20 acres		X		X		
20 acres or larger	X			X		

# Fail to Meet Standards

Options available to the County may include:

- Mitigation
  - e.g., requiring storage or treatment
- Restricting the land use
  - e.g., through conditions of approval
- Denying the land use

# Addressing Concerns

- Low-flow wells: re-test in dry season or install storage
- Notification to neighbors when pump testing
- Considered usage limit
  - exceeds County authority

# Addressing Quality

Test for:

- coliform bacteria
- nitrates
- possible expansion: e.g., arsenic, salinity

# Not Perfect

Based on 5 years of experience, considering changes:

- Notification process
- Dry-season testing
- 12-hour pump test

# Needs

- **Local capacity.**
  - technical expertise to evaluate water information
- **Better data.**
  - Available data typically broad-brush (based on regional studies) or narrowly applicable (based on a site-specific hydrogeologic study).
- **Collaboration.**
  - Water issues occur at local, regional and state-wide scales. Need coordination and collaboration across these scales.