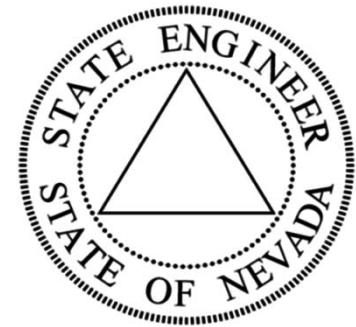


# Nevada Water Law *Current Issues*

## 2018 Water Summit

Jason King, P.E.  
State Engineer  
January 30, 2018



# Nevada Division of Water Resources

## Mission Statement:

To conserve, protect, manage and enhance the state's water resources for Nevada's citizens through the appropriation and reallocation of the public waters.

# What We Do

- Appropriation of all waters within the state  
(except Colorado River)
- Adjudication of pre-statutory and federal reserved right claims
- Distribution & regulation of certain decreed surface water
- Well Drilling Regulation, Licensing and Inspection
- Dam Safety
- Flood Plain Management
- Water Planning
- Aquifer Storage and Recovery (ASR)
- Effluent Reuse
- Subdivision Review
- Water Right Ownership

# What Keeps Me Up at Night?

1. Severely over-appropriated groundwater basins
2. Domestic wells
3. Conjunctive Management
4. Mitigation of impacts to avoid conflicts

# Issue #1

*How to bring severely over-appropriated groundwater basins back into balance?*

# Groundwater Management in Nevada

*Nevada's groundwater is divided into 256 hydrographic basins and sub-areas*



# Groundwater Management in Nevada

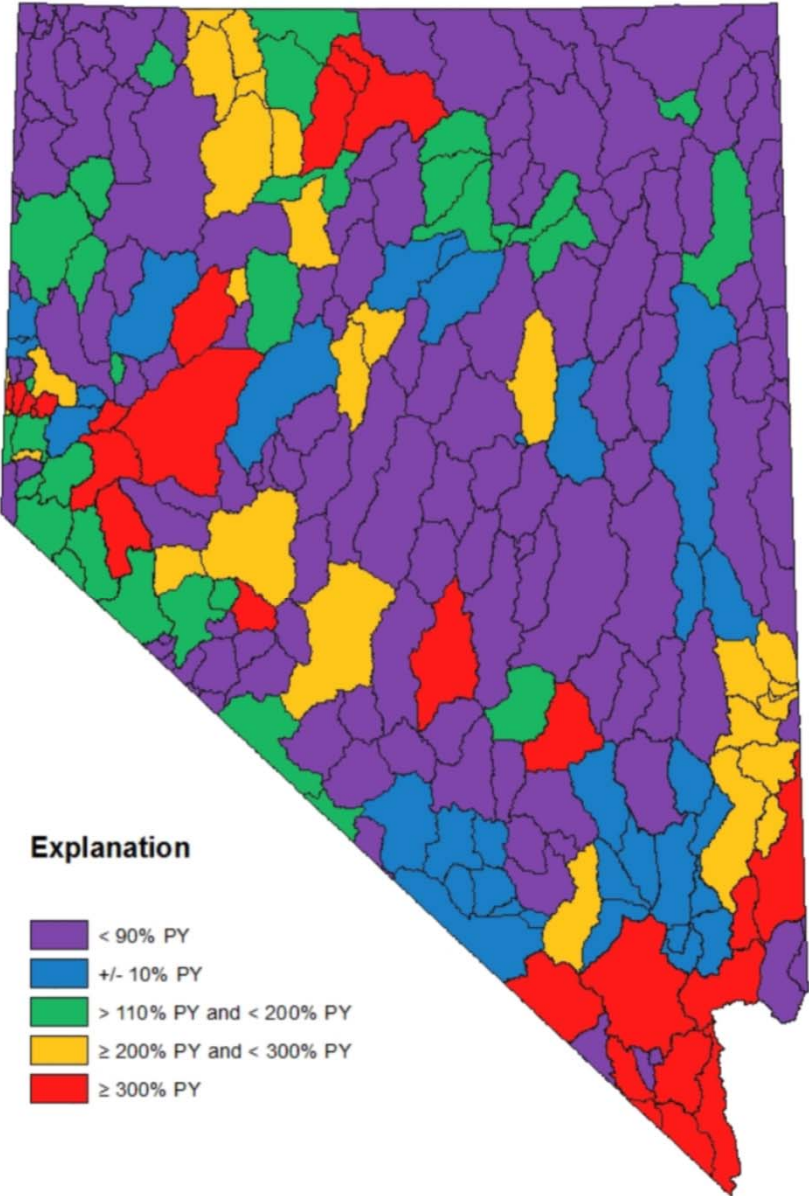
## Amount of groundwater available based on the **Perennial Yield Concept**

- The maximum amount of ground water that can be salvaged each year over the long term without depleting the ground water reservoir.
- The perennial yield cannot be more than the natural recharge and is usually limited to the natural discharge.
- The goal is to not allow the consumptive use of groundwater rights and domestic wells to exceed the basin's perennial yield.

# Perennial Yield Values

- Highest: 84,000 af – Spring Valley
- Lowest: 10 af – Emigrant Valley-Papoose Lake Valley
- Approximately 25% of basins have a PY < 1,000 af
- Sum of PY's = ~2 million acre-feet

Ratio of  
Committed  
Water  
Resources  
to  
Perennial  
Yield by  
Basin



# How Did the Basins get Over-Appropriated?

- Most were already over appropriated prior to the Perennial Yield (PY) being established (keep in mind that 25% of PY's are < 1000 acre-feet).
- Popular thinking that not all rights would be put to their maximum beneficial use, so it was acceptable to over-appropriate.
- Desert Land Entry Success Rate
  - Diamond Valley and Pahrump Valley
- In the case of Las Vegas Valley, purposely allowed to overdraft (revocables) with the hope that infrastructure would eventually be in-place to deliver Colorado River water and the over pumping would be curtailed.

*How to deal with severely over-appropriated groundwater basins?*

- Curtail by priority; or
- Designate Critical Management Areas
  - Starts 10 year time clock to develop a Groundwater Management Plan (GMP); or
- Voluntary stakeholder GMP's

## *Severely Over-Appropriated Basins*

- Need a more robust statutory framework to provide stakeholders the ability to create and adopt a groundwater management plan for approval by the State Engineer's Office.
- The framework needs to allow for maximum flexibility in terms of what tools can be used to bring a basin back to a sustainable level.
- Need to settle whether the GMP is binding on ALL water users or just those that want to participate.

## Issue #2

*How to deal with exempt domestic wells in fully appropriated groundwater basins?*

# Domestic Wells

- Domestic wells – only exempt use in our water Law
- Domestic wells have a priority of the date that the well was completed. 534.080(4)
- Curtailment by priority

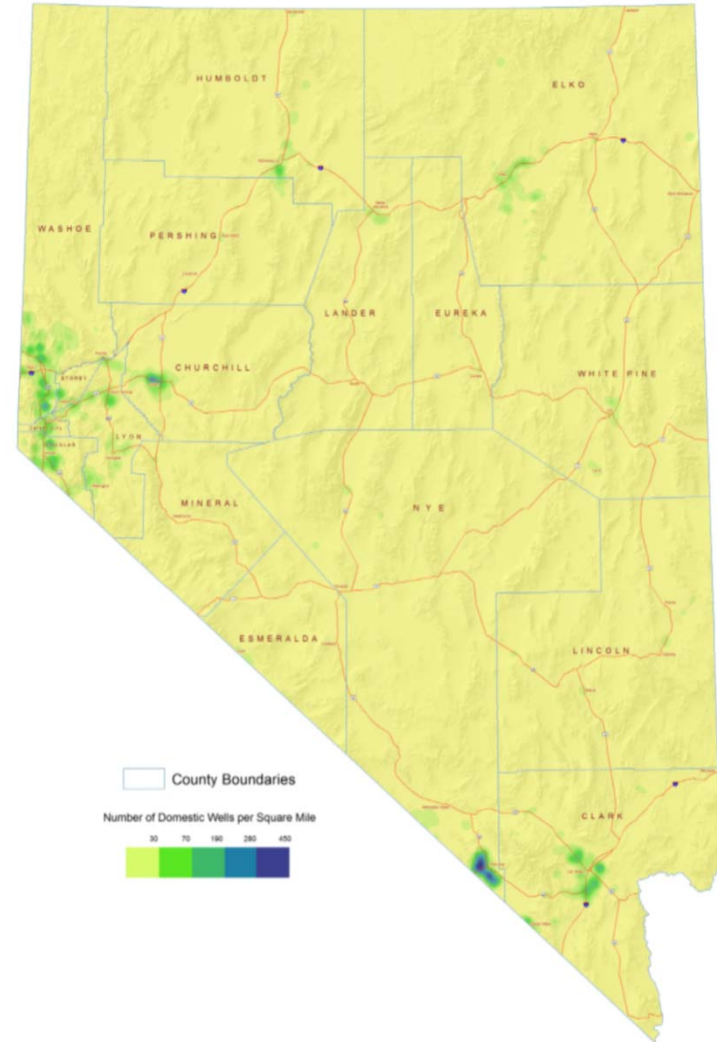
*“... where it appears that the average annual replenishment to the groundwater supply may not be adequate for the needs of all permittees ...the State Engineer may order that withdrawals, including, without limitation, withdrawals from domestic wells, be restricted to conform to priority rights.” 534.110(6)*

# Domestic Wells

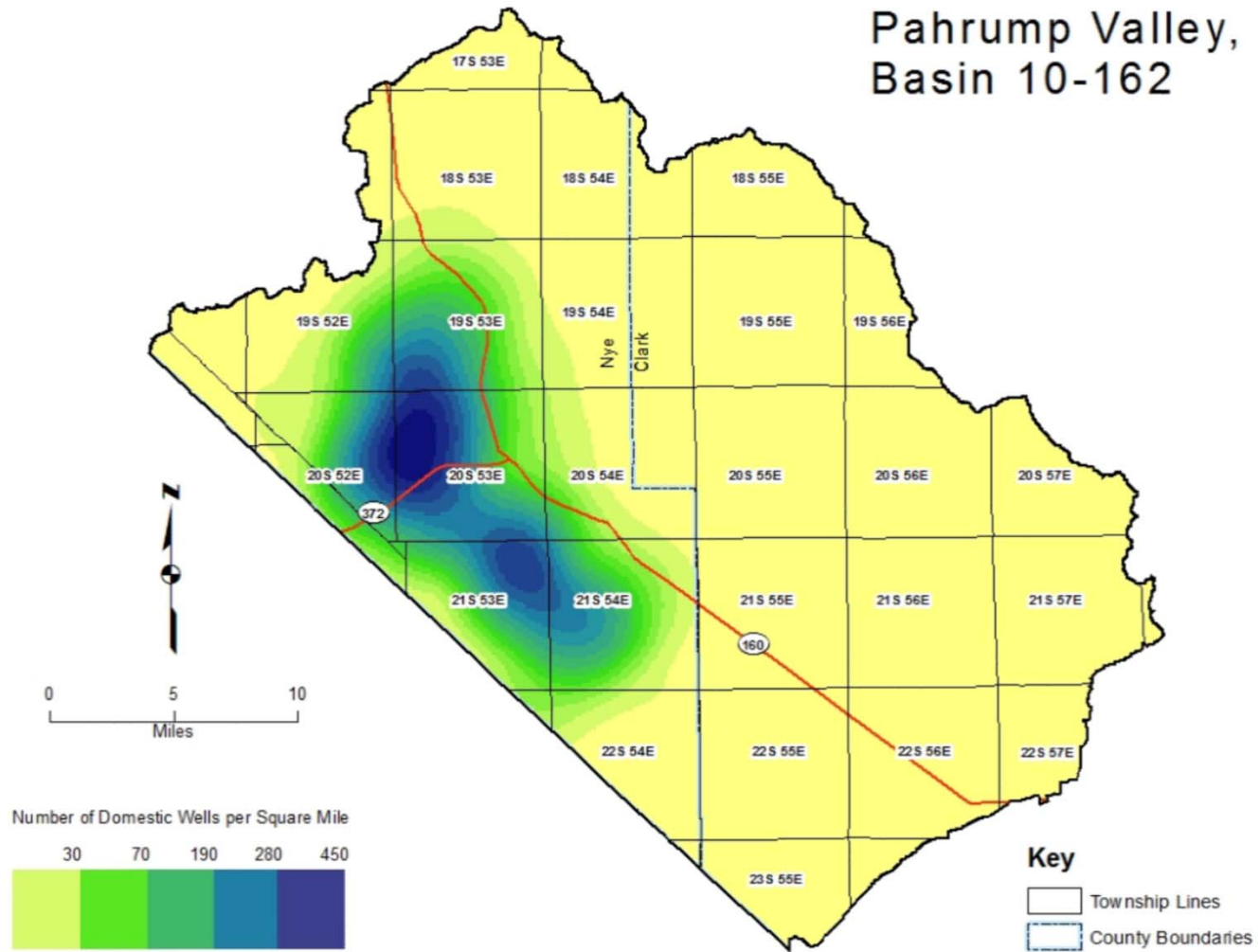
Total 50,342

## Top 5 By Basin:

1.	Pahrump	11,280	22%
2.	Las Vegas	5,682	11%
3.	Carson Desert	4,086	8%
4.	Carson Valley	3,759	7.5%
5.	Truckee Meadows	1,753	3.5%



# Domestic Wells in Pahrump



# *Domestic Wells*

- Order 1293 issued 12/19/17 in Pahrump, prohibiting the drilling of any new domestic wells without the dedication (relinquishment) of 2.0 acre-feet (AF) of a valid water right.
- Order has been appealed.
- 2017 Legislative Session
  - SB 271 - during times of curtailment, only outdoor water would be stopped.
  - SB 272 - in basins consistently over-pumped, domestic wells could be ordered whereby they can only pump .5 AF instead of 2.0

## *Domestic Wells*

- In severely over-appropriated basins, why should any more exempt domestic wells be allowed when they will be the first to be cut-off during curtailment?
- Need a statutory amendment to provide a softer landing for domestic well owners in times of curtailment.

## Issue #3

### *Conjunctive Management*

*“Jointly manage the appropriation, use and administration of ALL waters, regardless of source.”*

# Nevada's Water Law

- Surface water law – NRS Chapter 533
- Groundwater law – NRS Chapter 534
- 1000's of decisions and dozens of court affirmations have molded water policy in Nevada
- The water law and science have not always been harmonized
  - There have been numerous State Engineer decisions that dealt with groundwater/surface water connectivity over time but there hasn't been enough momentum to further the effort.

# Some History

## IV.

The State Engineer concludes that Nevada water law provides for the management of surface water and ground water as distinct sources. The State Engineer concludes that to change that scheme of water management at this point in time would conflict with existing rights and threaten to prove detrimental to the public interest. The State Engineer also concludes that since he has

Ruling 5079, 2001

# The Problem

- Surface water used first, typically most senior priority
- Groundwater, generally, used after surface water fully appropriated, therefore junior to surface water rights
- In hydrologically connected systems, groundwater pumping either captures water that would ordinarily flow to the river OR pulls water from the river into the groundwater resource.
- Nevada's water law, based on the prior appropriation doctrine, must protect existing rights from subsequent use.

# Humboldt River

- Fully decreed
  - Priorities are 1860's to early 1900's
  - 285,000 acres irrigated under the decree, rights total ~700,000 af
  - Flows through 34 groundwater basins.
- Current groundwater appropriations of 716,000 af
  - 2016 pumpage ~323,000 af
  - 43,000 af above Palisade
  - 280,000 af below Palisade
- All Decree rights senior to all groundwater rights
- Groundwater pumping depletions of river flow supported by existing studies

# Humboldt River

- USGS and DRI building a capture model of the entire drainage
  - Best available science
  - Completion by the end of 2019
  - Better define surface water – groundwater connectivity
- Humboldt River Working Group (HRWG) created
  - Members represent agriculture, mining, municipal interest from upper, middle and lower Humboldt River
- Goal is to adopt regulations to address mitigation (augmentation) by the time the capture model results are finalized.

## Issue #4

*Can a conflict be mitigated?*

# The Problem

- Nevada Revised Statutes (NRS) 533.370(2)

The State Engineer shall reject a water right application and refuse to issue the requested permit where:

- there is no unappropriated water in the proposed source of supply, or
- its proposed use or change *conflicts* with existing rights or with protectable interests in existing domestic wells, or
- the water right threatens to prove detrimental to the public interest.

# The Problem

If possible, conflicts should be avoided!

But if they can't, should a single, or few, small water rights, be able to hold hostage the entire water resource in a given basin because they may be conflicted with e.g. spring dries up or the water table lowered to a point where the pump can't function?

OR

Should a water right be granted if it can be shown the new water right owner can mitigate the conflict (drill or deepen well, provide water delivery etc.)?

# The Answer?

- Courts will decide
  - We're litigating this issue in a couple of high profile cases.
  - If conflicts can't be mitigated, basins will be shut down to appropriations while there is still water available under the perennial yield estimate.



Questions?