

“Well Permitting – Mining, Agriculture and Livestock Perspectives”

Managing Groundwater Development in Nevada

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Regulations Workshop
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Topics of Presentation

1. Brief History of Nevada Water Law
2. Managing Groundwater Development
3. Criteria Used in Determining Whether to Approve or Deny a Water Right
4. Mining applications
5. Agricultural Perspectives
6. Livestock water from wells

Nevada Water Law History

1903 – Office of the State Engineer Created

- Nevada Senator Francis Newlands wanted a federal reclamation project and together with USGS they helped promote legislation for the creation of the office.
- A state water regulatory agency was needed to promote approval of Nevada as the recipient of such a project, to be owned and administered by the newly established United States Reclamation Service.

History of Legislation

1905

- An Act setting forth that all water within the boundaries of the state belongs to the public and may be appropriated for beneficial use by filing for and obtaining a permit and not otherwise
- Beneficial use shall be the limit and extent of the right

1913

- Act setting forth comprehensive procedures on:
 - Appropriation
 - Adjudication
 - Distribution
 - Conservation of underground waters
 - Eminent Domain
 - Defined beneficial use
 - Declared all water to belong to the public

Water Law History

1939

- Act relating to underground water and wells
 - Conservation
 - Distribution
 - Designation
 - Regulation

Water Law History

1999

- Inter-basin Transfer criteria established
- Surface water can no longer be forfeited

2007

- Administrative Fines and Penalties established by regulations
 - Up to \$10,000 per day per violation
 - Repayment of up to 2X the amount of water illegally taken or wasted
 - Recoup costs accrued by the State Engineer in going after the violator

Water Law History

In recent years, there have been other additions to Nevada's water law that address:

- Obtaining water rights for speculative purposes
- Protection of domestic well owners
- Water for livestock on Public Lands

Water Law in the West

Prior Appropriation Doctrine

- Water belongs to the public
- First in time, first in right
- Beneficial use is the limit of the water right
- Use it or lose it

Managing groundwater development in Nevada

Where did the authority come from?

- Declaration of Legislative intent to prevent the waste and contamination of groundwater
- State Engineer empowered to administer this directive
- State Engineer authorized to make such rules, regulations and orders deemed essential in an area where the groundwater is being depleted

Managing groundwater development in Nevada

How does the state regulate the number of wells and the water use?

- You have to have a license to drill a well in Nevada
- You have to have a permit
- The licensed well driller is required to comply with the regulations and the water law

Domestic Water Wells

- A water right is not required to drill a domestic well – an exemption
 - Domestic use is defined as culinary and household purposes, in a single family dwelling, the watering of a family garden, lawn and the watering of domestic animals
- The maximum annual withdrawal is limited to 2.0 acre-feet per year

The Appropriation Process

- Application to appropriate, map & fee
- Initial Review
- Send for publication
- Protest Period
- RFA – Ready for Action
- Hearing if required to resolve protest
- Determination of Action

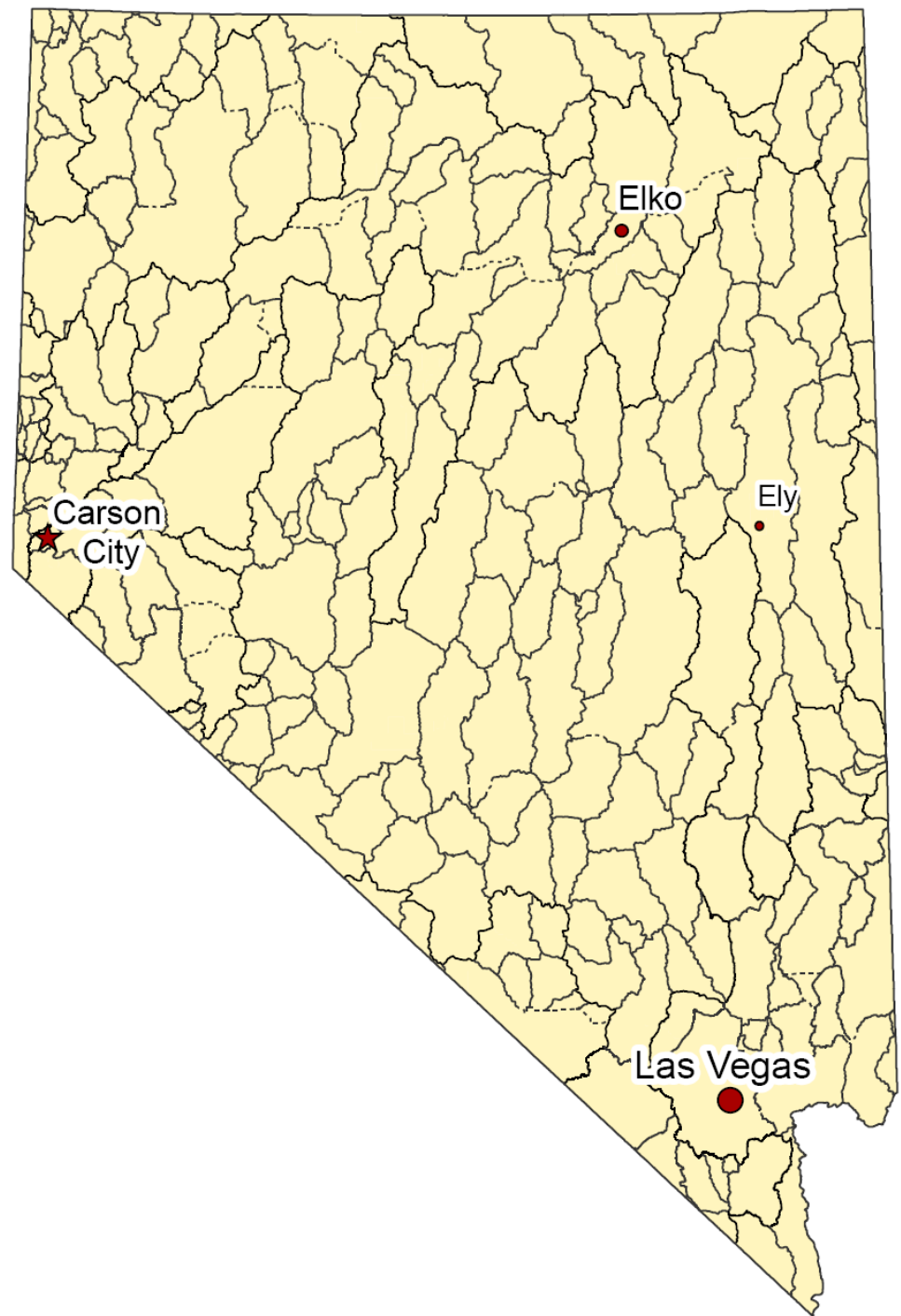
Groundwater Development

- Very little until the 1960's
- State divided into hydrographic basins where each valley fill aquifer is generally considered a separate source
- USGS and Nevada completed many reconnaissance level hydrologic studies to determine basin recharge and discharge
- **Perennial Yield Concept**
 - The maximum amount of ground water that can be salvaged each year over the long term without depleting the groundwater reservoir

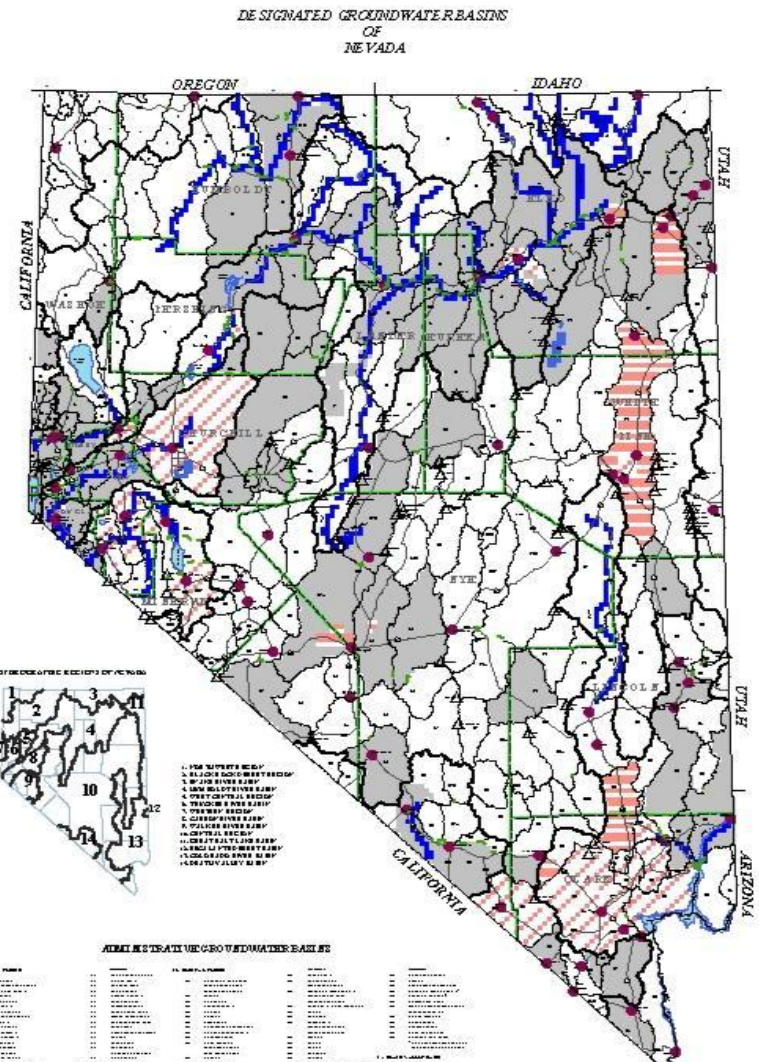
Groundwater Data

- Licensed well driller required to file well log
- All well log and flow testing data are public
- All water use data are public
- Permit data base is public
- Check out the web page at <http://water.nv.gov>

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



120 of the 256 Groundwater Basins are Designated or Partially Designated



- 1. THE SIERRA NEVADA
- 2. ELIOT'S ROCK WATERSHED
- 3. JOHNS VALLEY
- 4. LOW RELIEF WATERSHED
- 5. GREAT SALT LAKE
- 6. TRUCKEE RIVER BASIN
- 7. FRESHWATER BASIN
- 8. CARSON RIVER BASIN
- 9. WALKER RIVER BASIN
- 10. CENTRAL BASIN
- 11. GREAT SALT LAKE BASIN
- 12. GREAT SALT LAKE BASIN
- 13. COLEGIO RIVER BASIN
- 14. COLEGIO RIVER BASIN

ADMINISTRATIVE GROUNDWATER BASINS

Basin Name	County	Designation
1. THE SIERRA NEVADA	Albany	Designated
2. ELIOT'S ROCK WATERSHED	Albany	Designated
3. JOHNS VALLEY	Albany	Designated
4. LOW RELIEF WATERSHED	Albany	Designated
5. GREAT SALT LAKE	Albany	Designated
6. TRUCKEE RIVER BASIN	Albany	Designated
7. FRESHWATER BASIN	Albany	Designated
8. CARSON RIVER BASIN	Albany	Designated
9. WALKER RIVER BASIN	Albany	Designated
10. CENTRAL BASIN	Albany	Designated
11. GREAT SALT LAKE BASIN	Albany	Designated
12. GREAT SALT LAKE BASIN	Albany	Designated
13. COLEGIO RIVER BASIN	Albany	Designated
14. COLEGIO RIVER BASIN	Albany	Designated

NOTE
The map of Nevada shows the designations of administrative groundwater basins. It does not show the location of public water supplies. The symbols for public water supplies are shown in the legend. The location of the administrative groundwater basins is shown in the legend. The symbols for public water supplies are shown in the legend.



How does the State
Engineer Decide Whether
or not to Approve or Deny
an Application for water?

Criteria

Approval or denial of water rights based on four (4) primary criteria:

- Is there any un-appropriated water?
- Will it conflict with existing rights?
- Will the proposed use of the water prove detrimental to public interest?
- Does the use conflict with existing domestic wells?

Criteria

Additional criteria for approving a water right was added in the 1993 and 1995 legislatures:

- Applicant must show good faith to construct the works necessary to put the water to the intended beneficial use with reasonable diligence.
- Have financial ability to construct the project and apply the water to beneficial use with reasonable diligence.

Additional Considerations for Mining

- Temporary use for mineral exploration – by waiver of the statute for drilling water
- Temporary change of point of diversion to cover a new well – splitting off existing right
- Multiple wells allowed by Order of the State Engineer for the entire mine area for mine dewatering – the super permit
- Exceeding the basin perennial yield on a temporary basis for mine dewatering – permit expires

Agricultural Industry Perspectives

- Temporary change of point of diversion to cover a new well – splitting off existing right
- Draw against the basin perennial yield is only the crop consumptive use portion determined from climate data

Additional Considerations for Water for Livestock

- Where a drought declaration has been made – an emergency permit may be obtained to water livestock from a well
- Permit good for one year so you have to follow up with a regular appropriation
- Amount of water approved may be tied to the total rights already in place in that basin for that operation
- Temporary change of point of diversion to cover a new well – splitting off existing right

Groundwater Management Success

1. Dividing the state into hydrographic basins and establishing perennial yields (water availability) has provided a framework to issue permits
2. Prior Appropriation – tried and true
3. Cancellation, Expiration, Forfeiture and Abandonment have provided ways to take back water from those who aren't using it and make it available to others who have a beneficial use
4. The threat of hefty fines and penalties work as a deterrent to violations of water law

Groundwater Management Challenges

1. Over-appropriated basins – there are a few
2. Groundwater - Surface Water Connection
3. Inter-basin Transfer Criteria
 - a) Environmentally Sound
 - b) Future Economic Growth
4. Speculation
 - a) Water is so precious and therefore so valuable, people are willing to do almost anything to obtain water rights and subsequently, hold on to them for future sale



**The road to
anywhere Nevada!**

Questions?

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