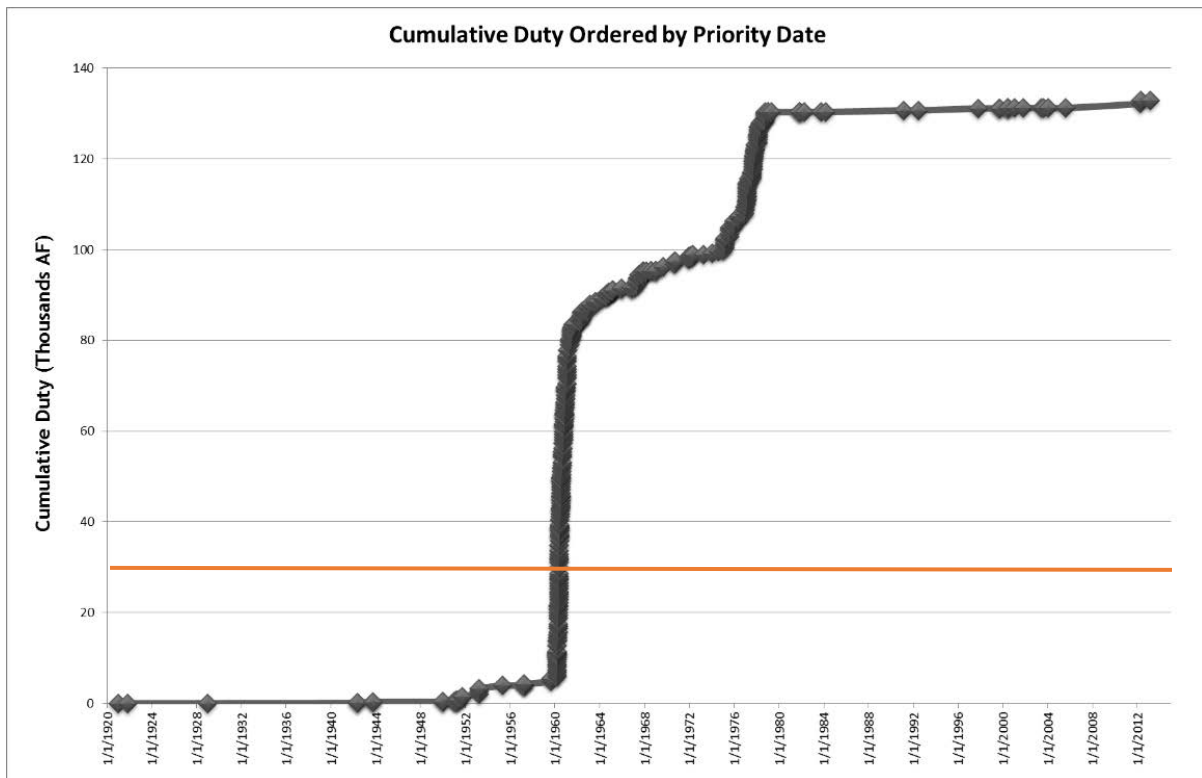


## Diamond Valley Background:

- Perennial yield of 30,000 acre-feet (1968 USGS reconnaissance series report) or 35,000 acre-feet (2016 USGS report);
- ~26,000 acres under irrigation – about 200 “circles”;
- About 131,000 acre-feet appropriated of which 125,000 acre-feet is for irrigation;
  - Many reasons given why this happened with a couple being: Desert Land Entries had high success rate and amount of water available for appropriation was not really known at the time.
- Current groundwater pumping approximately 76,000 acre-feet with net pumping about 64,000 acre-feet; 58% of what can legally be pumped and 49% of what can legally be consumed, but still consuming about two times more than the perennial yield;
- Over 110,000 tons of hay produced annually (alfalfa and grass) with total farming income over \$22M annually. The hay sector has an average final demand multiplier of 1.67; for every \$1 generated by the sector Eureka County’s economy will benefit \$1.67 of total revenue. The hay sector has an average income multiplier of 1.28 and an employment multiplier of 1.5. Thus, for every \$1 generated by hay production, total county household income increases by \$1.28 and for every job added by the hay sector, total employment in Eureka County increases by 1.5 employees. (2005, University of Nevada Reno Technical Report UCED 2005/06-14 *Updated Economic Linkages in the Economy of Eureka County*);
- Diamond Valley has been characterized as the “social glue” that holds our community throughout the booms and busts of mining;
- Nearly two-thirds of Eureka County residents get their domestic water needs from DV – Town of Eureka, two GIDs, and dozens of wells;
- Only basin in Nevada currently designated as a Critical Management Area (NRS 534.110).





### Water Wars - 1970's and 1980's:

- Neighbors protesting neighbors
- Claims of impacts to valley floor springs
- State Engineer Hearings in 1980s - movement towards development of a Groundwater Board to find local solutions
- Initiation of formal adjudication

### Movement towards a Critical Management Area and Groundwater Management Plan:

- March 2009 State Engineer Workshop similar to 1980's request – “take matters into your own hands to reduce pumping.”
- Many local efforts with a focus on “finding” funding to purchase and retire water rights;
  - Grants
  - Feasibility studies
- 2011 Legislature passed AB 419 (NRS 534.110) allowing CMA designation
  - Seemed to empower more local approaches to finding solutions
- Applications for groundwater rights to mitigate declines in vested claims to surface water added a wrinkle
  - Created a sense of urgency for some and futility for others.
- March 2014 – Another State Engineer Workshop but focused more on the “new” ability provided under AB 419
  - “Need to make progress” was the message taken to heart
- CMA designation in August 2015
  - Something to come together on
- Many formal meetings making progress towards a Groundwater Management Plan
  - As the only CMA currently designated in Nevada, many Diamond Valley water users wish to find local solutions through development of a GMP that is specific and unique to Diamond Valley. They do not wish for their efforts to resolve the challenge in Diamond Valley and keep their agricultural community intact to affect anywhere else in Eureka County or the balance of the state of Nevada.

## Why not simply regulate by strict priority and cut off all juniors in Diamond Valley?

Farmers were incentivized to come to Diamond Valley under the Desert Land Act. They applied for water rights and were granted water rights by the State Engineer. These families have invested their lives into the community. Water rights holders in Diamond Valley are only doing what they are legally entitled to do. Through conservation efforts, much less water is being pumped than is allowed.

We argue that prior appropriation must be followed from the inception of groundwater development at the first application for water and every subsequent application moving forward in a way to avoid conflicts with prior rights and detriment to the water resource itself. If followed in this way, there would not be groundwater appropriations above the perennial yield. Prior appropriation is beautiful if followed this way. Severely over appropriating a basin and then allowing nearly 60 years of overpumping, letting a community be developed, people's entire livelihoods staked in this community, and then saying "let's apply strict prior appropriation" would likely prove devastating to the community. We must have the flexibility within the law **for Critical Management Areas** to allow these local communities to find local solutions to keep communities intact while helping address the past mistakes by the State Engineer's office.

### Diamond Valley Draft Groundwater Management Plan Highlights:

Vision Statement - Diamond Valley and Southern Eureka County are prosperous and economically stable using all means including education and diversification. We are a community that is united, fair and forward thinking about our groundwater usage in order to ensure stability for ourselves now and our future generations.

#### Goals

- Stabilize groundwater levels of the aquifer
- Net groundwater pumping not to exceed perennial yield
- Increase groundwater supply
- Maximize groundwater users committed to achieving vision statement
- Preserve economic outputs
- Maximize viable land-uses of private land
- Do not impair vested rights
- Preserve the socio-economic structure of Diamond Valley and southern Eureka County

Water market-based system - During this process, the groundwater rights holders received presentations on the potential development and implementation of a water market-based system meant to provide ultimate flexibility in using water, while incentivizing conservation and allowing quick sale, lease, trade, etc. of water in times when needed by willing participants. This GMP was developed adapting these concepts to local needs, desires, and constraints.

Water Shares - All irrigation groundwater rights and mining groundwater rights with an irrigation base permit, in good standing according to the records of the State Engineer, will be converted to and issued groundwater shares upon approval of the GMP. Shares issued for mining groundwater rights with an irrigation base permit will be issued on the irrigation base permit, not the mining permit. Priority (i.e., seniority) taken into account -

Accomplished using formula:

$$WR * PF = SA$$

WR = Total groundwater right volume as recognized by DWR accounting for total combined duty

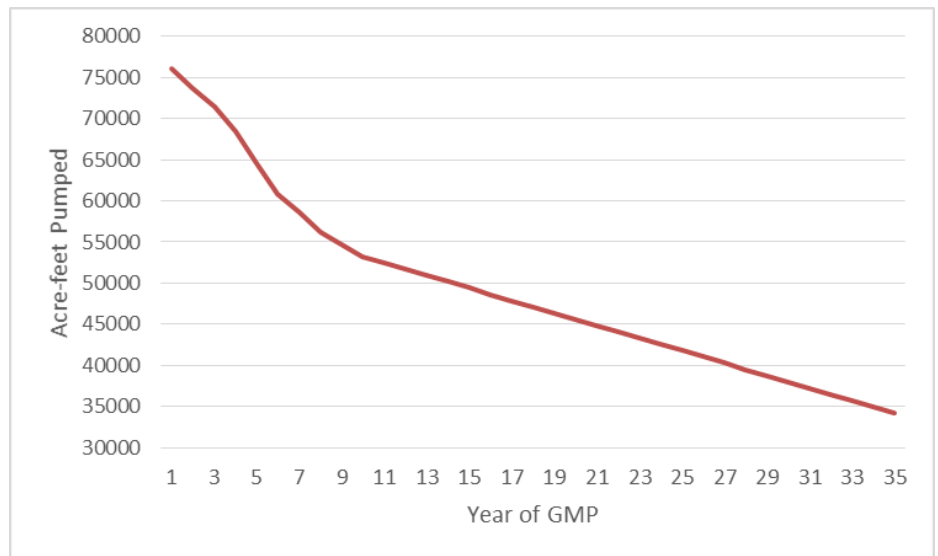
PF = Priority factor based on seniority

SA = Total Groundwater share allotment

Annual Water Allocations and Pumping Reductions – annual allocations will be issued to shares each year following the benchmark reductions outlined in the GMP. A secure groundwater share and allocation transfer, settlement, and market system will be developed. Groundwater can only be withdrawn if there is a positive balance in an account. Unused water balances will roll over (banked). Any or all of any groundwater allocation in any individual groundwater Account may be transferred to any other individual groundwater account through willing-party agreements and transactions.

Annual allocations are calculated by taking the total pumping allowed in any given year under the GMP and dividing by the total number of shares, being 114,906.

Year of GMP	Groundwater Pumping (Acre-Feet)	Cumulative Pumping Reduction (%)	Water Allocation (AF/Share)
1	76000	0	0.66
2	73720	3	0.64
3	71440	6	0.62
4	68400	10	0.60
5	64600	15	0.56
6	60800	20	0.53
7	58520	23	0.51
8	56240	26	0.49
9	54720	28	0.48
10	53200	30	0.46
11	52440	31	0.46
12	51680	32	0.45
13	50920	33	0.44
14	50160	34	0.44
15	49400	35	0.43
16	48640	36	0.42
17	47880	37	0.42
18	47120	38	0.41
19	46360	39	0.40
20	45600	40	0.40
21	44840	41	0.39
22	44080	42	0.38
23	43320	43	0.38
24	42560	44	0.37
25	41800	45	0.36
26	41040	46	0.36
27	40280	47	0.35
28	39520	48	0.34
29	38760	49	0.34
30	38000	50	0.33
31	37240	51	0.32
32	36480	52	0.32
33	35720	53	0.31
34	34960	54	0.30
35	34200	55	0.30



Measuring Use and Administering the System - All groundwater pumped from Diamond Valley that is subject to the GMP shall be required to be metered using an approved smart flow meter, including a compatible wireless data transmission module with near real-time reporting.

Vested water rights - including spring vested rights that have been diminished and mitigated with groundwater rights, will not be under the jurisdiction or requirements of the GMP.

No out of basin transfers of water

State Engineer retains authority to analyze potential for conflicts and take action if necessary –Wells intended for use to be registered annually. This provides a nexus for the State Engineer to see if pumping will have unreasonable effects on another user or domestic well.

Diamond Valley Groundwater Authority

- Sets annual allocation (cannot operate out of GMP side-board reductions)
- Full-time, paid Water Manager
- State Engineer (or Deputy) is the chair
- Follow Open Meeting Law
- Determines waivers for certain provisions
  - Meter system
- Members have no financial interest in water in DV

Advisory Board - 7 members elected by DV groundwater rights holders. Mining, 2 Agriculture, 4 “open” (will very likely be whatever the main use of water is which is agriculture). Authority required to consult with AB and AB advise Authority on matters.