

Presentation of the Lower Virgin River and Basin 222 for the Nevada Committee on Public Lands

May 4, 2012

Ken Rock, General Manager

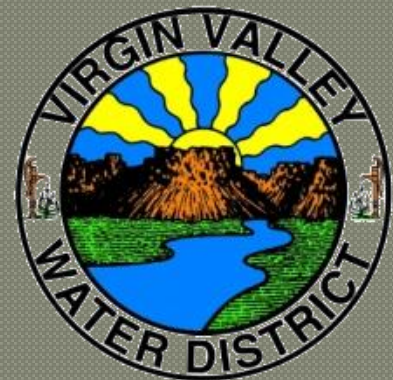
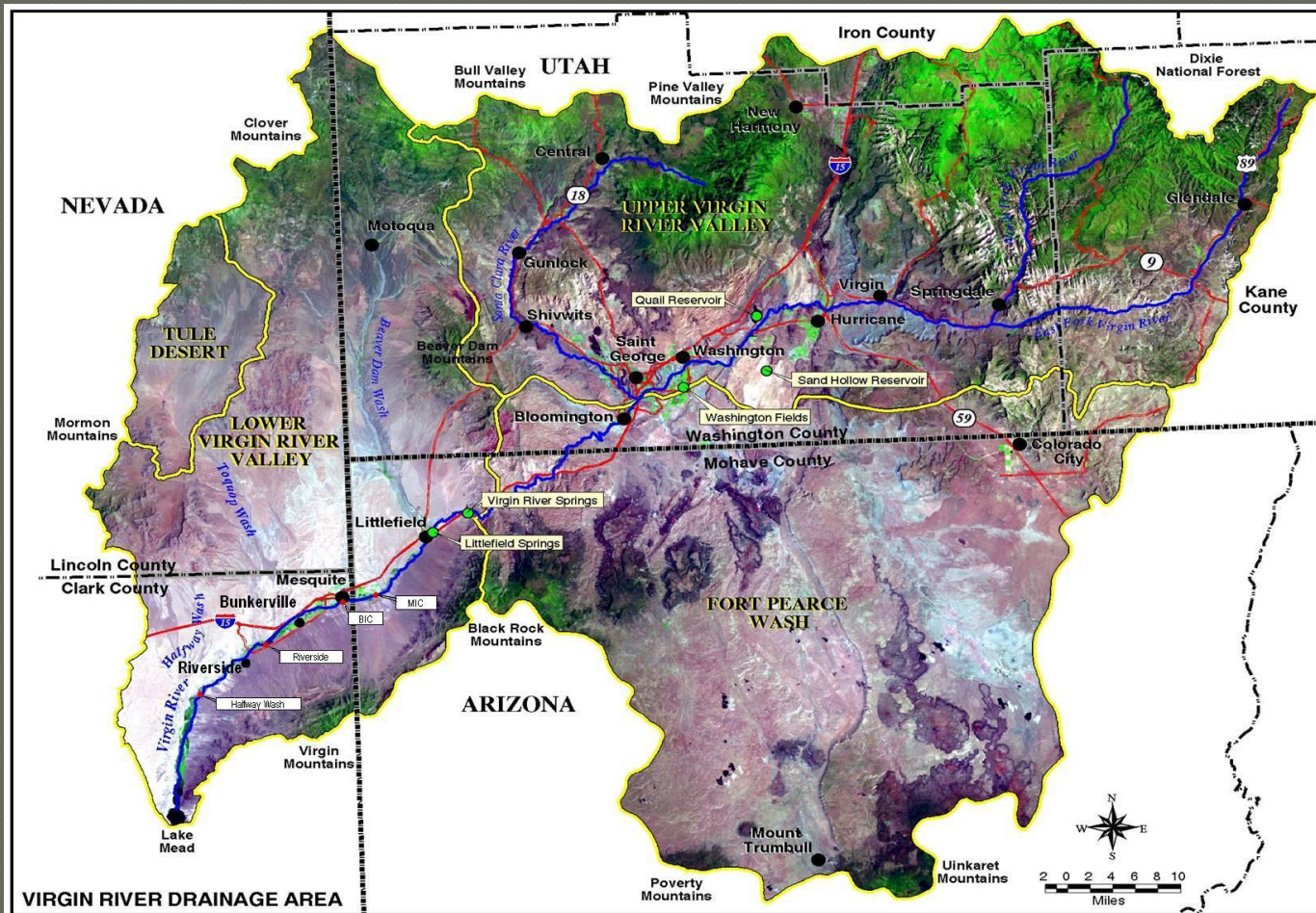
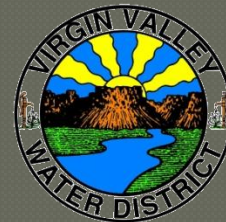


EXHIBIT H – LANDS
Document consists of 23 slides.
Entire Exhibit provided.
Meeting Date: 05-04-12

Locations of the Virgin Valley, Virgin River, and Basin 222





VVWD 2012 Customer Base

Meter Size (In Inches)	Number of Connections
3/4	7,422
1	122
1 1/2	85
2	90
3	12
4	20
6	8
8	2
10	1
12	1
Hydrant Meter	19
Total	7,783

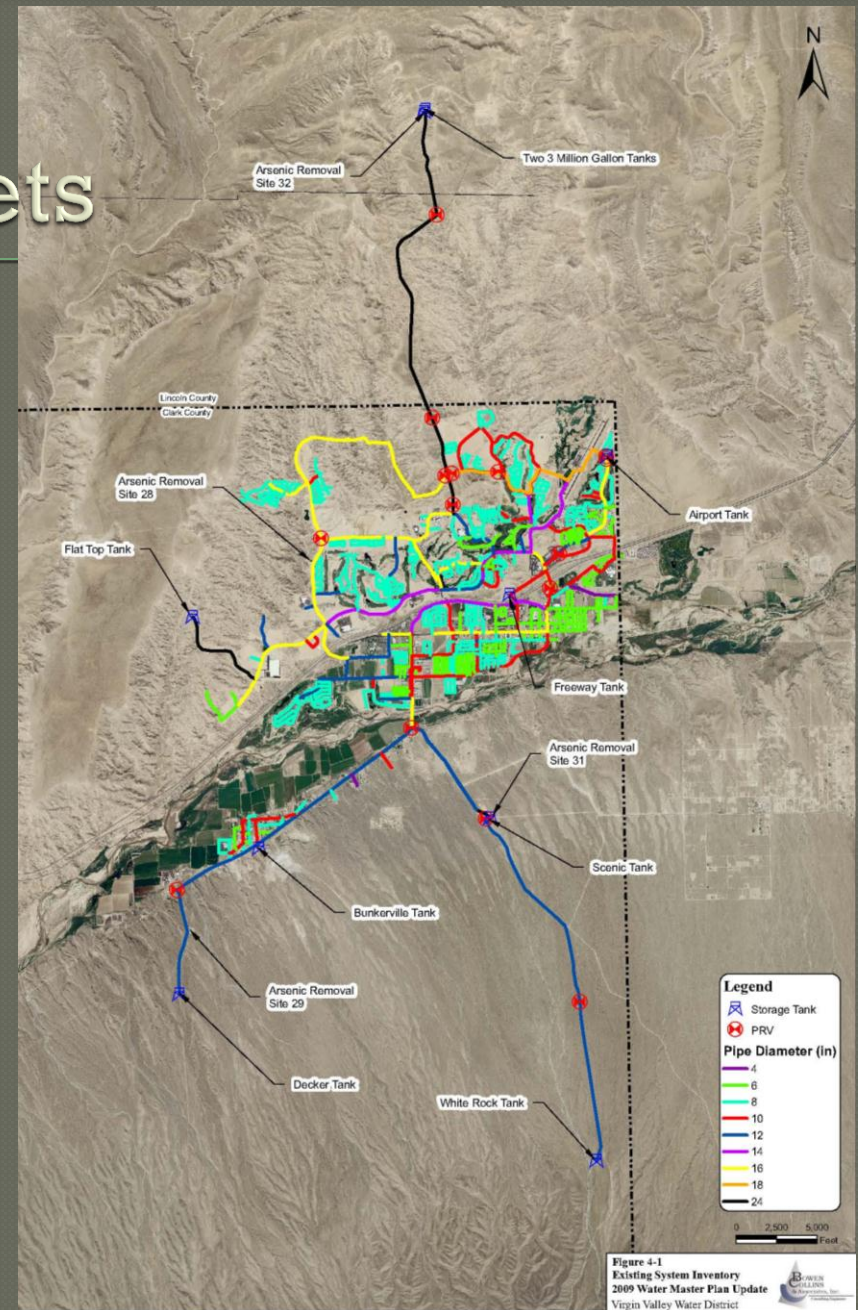


VVWD 2012

Below-Ground Assets

VVWD Main Lines

Diameter (inches)	Length (ft)
4	3,788
6	105,717
8	250,261
10	89,233
12	97,550
14	29,730
16	75,958
18	13,503
24	34,503
Total	700,243
Total (miles)	133



5 Arsenic Treatment Plants

Funding:

• <u>Grants</u>	
• US Army Corp	\$13,834,000
• Nevada AB 198	\$ 3,284,000
• US EPA	\$ 2,391,000
•	
	\$19,509,000
• <u>Bonds</u>	
• VVWD 2008 Bond	\$ 7,308,000

Construction Cost:

\$26,817,000

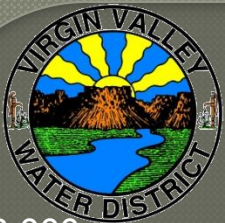
- **Construction**
- **Land**
- **Engineering**
- **Permitting**
- **Power**



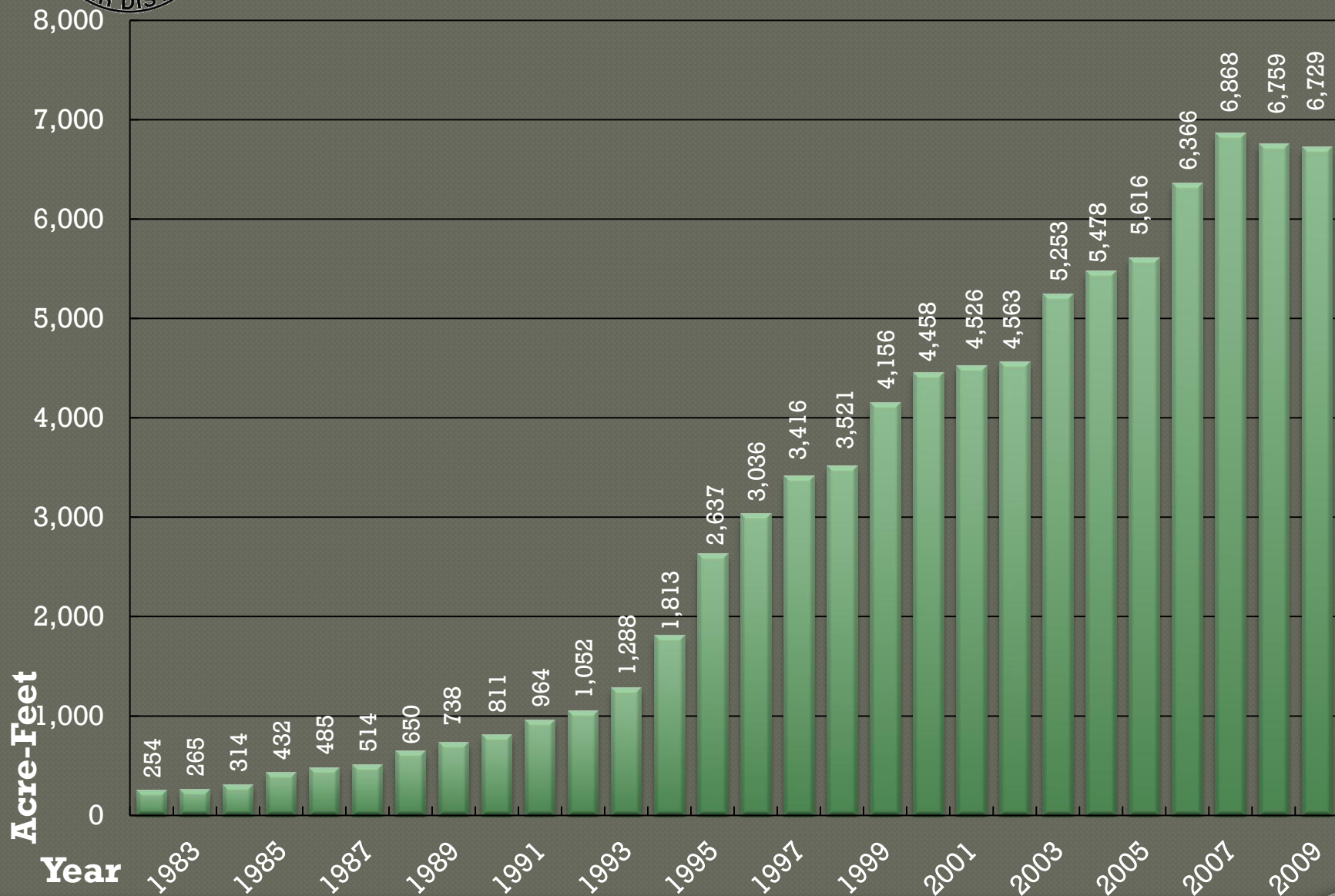
Plant #28

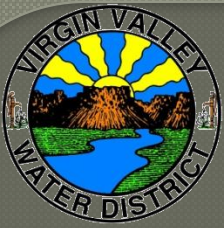


Plant Control Panel at Plant #32

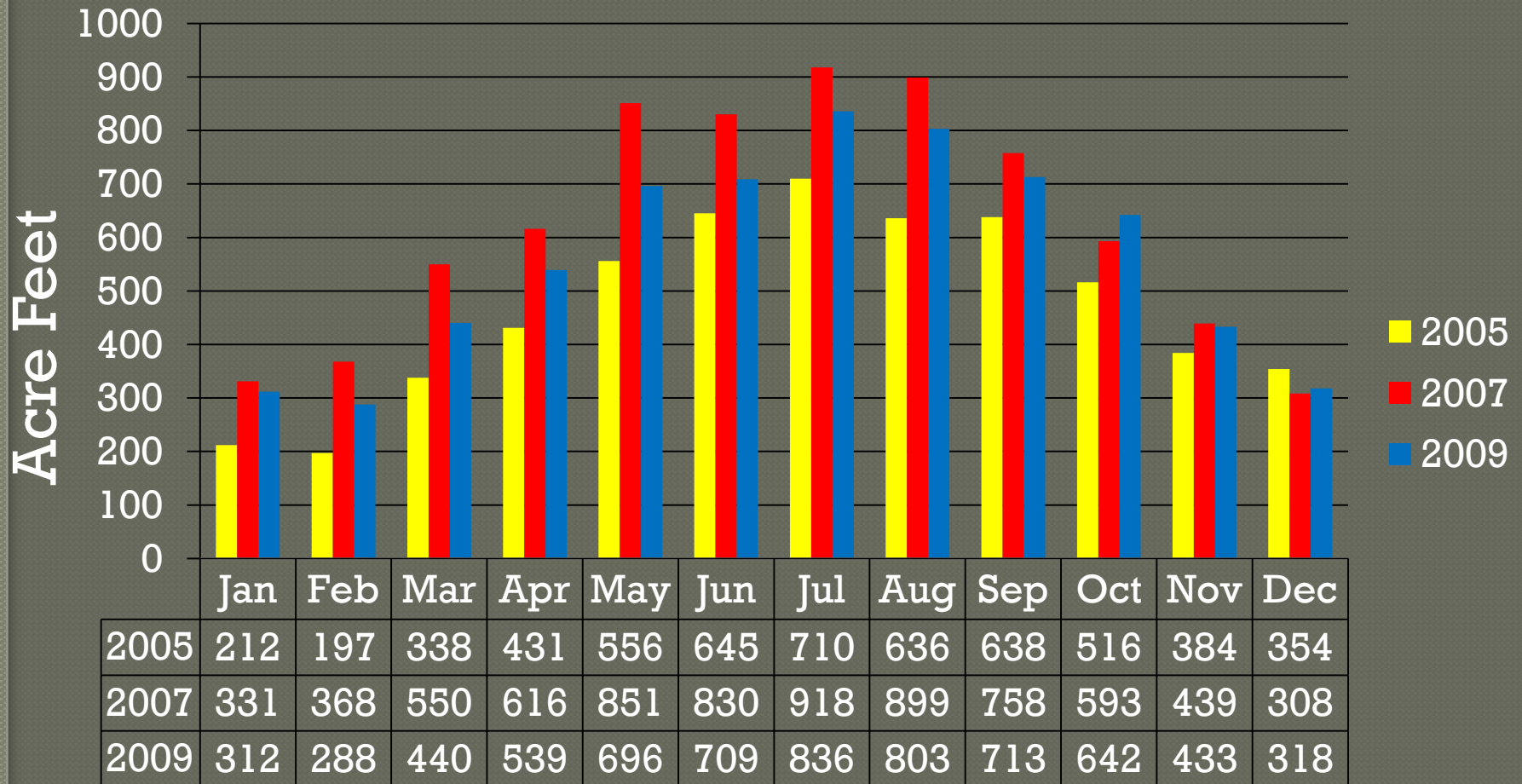


Annual Delivery of Potable Water 1982 to 2009

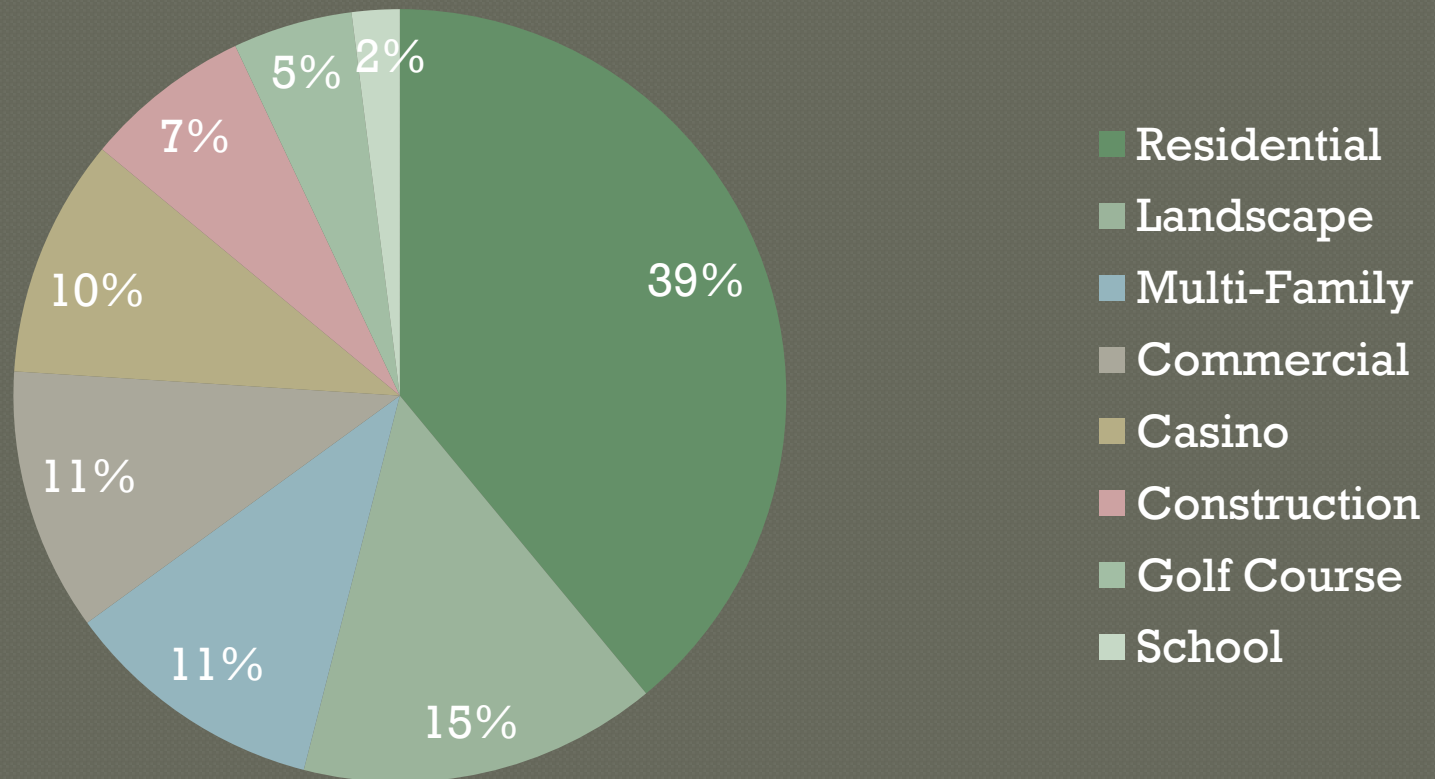




Monthly Water Production



Potable Water Use by Category



Plus: Golf Course and City Landscape uses of recycled and raw river water exceeding all of the above uses.

Lower Virgin River Flows

Bunkerville Diversion



Low Flow

Moderate Flow

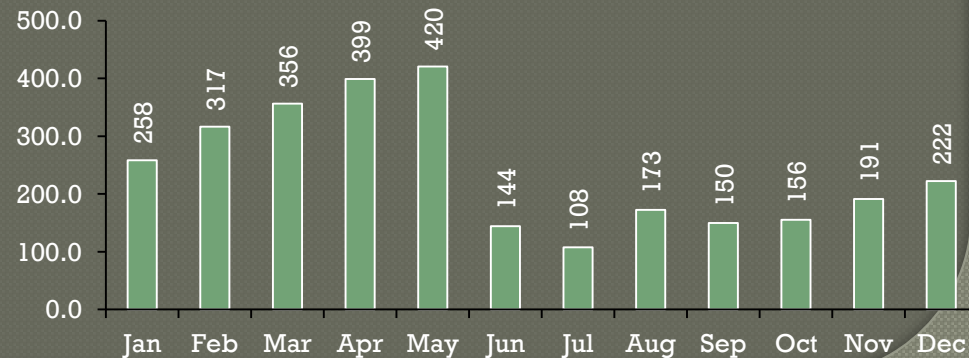


Virgin River at Littlefield, AZ gage 9415000 Period of record , 1929 – 2008

	cfs	afy
• Average annual flow,	241	174,604
• High annual flow 1983,	697	504,976
• Low annual flow 1977,	101	73,174
• Total water rights	189	137,276
• One cubic-foot per second (cfs) equals 724.5 acre-feet per year (afy)		

Data Source: U.S. Geological Survey

Mean Monthly Discharge, in cfs.



Surface water right allocations on lower Virgin River

Pre and Post June 1929 boulder Canyon Project Act Water

● Pre 1929 Agreement

• Bunkerville Irrigation Company (BIC)	8,116 afy
• Mesquite Irrigation Company (MIC)	9,670 afy
• Riverside	<u>1,062 afy</u>
Total	18,848 afy

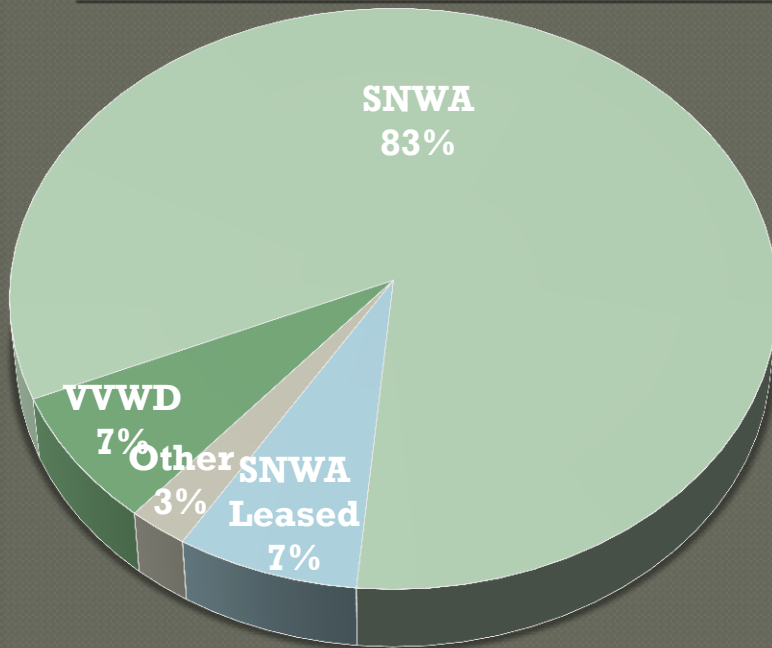
● Post 1929 Agreement

• Bunkerville Irrigation Company (BIC)	1,496 afy
• Mesquite Irrigation Company (MIC)	2,106 afy
• Riverside	<u>1,826 afy</u>
Total	5,428 afy

● Halfway Wash Permitted Rights

• Diverted seasonally October 1 through May 31 annually	<u>113,000 afy</u>
Total Surface water	137,276 afy

Lower Virgin River surface water allotments



Entity	Approximate Amount afy
VVWD	10,607
SNWA	113,717
SNWA Leased	9,810
Other	3,787
Total	137,921
One acre-foot per year (afy) equals 325,851 gallons	



Mesquite Irrigation Company (MIC) dam in 2010 flood



Bunkerville Irrigation Company (BIC) Dam in 2010 flood



Virgin Valley Water District

Mission:

- Safe and reliable water for today and tomorrow

Goals:

- Preserve access to mountain springs and well fields
- Preserve deep-aquifer potable water reserves
- Optimize non-potable (river) water opportunities
- Cooperate for maximum values and lowest cost for all

- SUSTAINABILITY-

Means to the goals

- Maintain river diversion facilities & water rights
- Get access to the Riverside and Halfway Wash allotments of 6,580 afy
- Define the sustainable groundwater yield for Basin 222
- Equitably determine interstate groundwater values and ensure Nevada's portion
- Establish spring and well field access in the north flank of the Virgin Mountains
- Preserve the Virgin Mountain water access while supporting Gold Butte habitat/wilderness status

Action

- Work with the Nevada State Engineer on definition and support for surface and ground water issues.

Action

- Get a definitive federal and state - supported study to determine the likely perennial yield from Basins 222 and 221.

Action

- ◉ Coordinate with all Virgin River conservation plans and groups to facilitate work that serves species and habitat protection while preserving water access.

Action

- With BLM, FWS, NPS, USBR and others, establish and preserve in perpetuity VVWD's equitable access to spring and groundwater here.

Partners in success

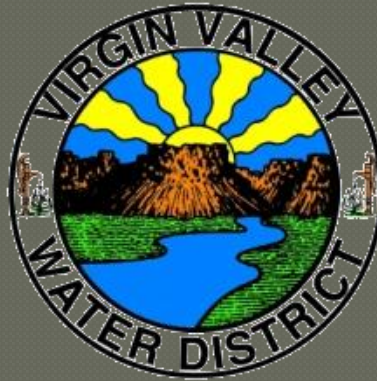
- Virgin Valley Water District Board of Directors
- Nevada Public Lands Committee
- Nevada State Engineer, Division of Water Resources
- US Geological Survey, Nevada Water Science Center
- Robcyn LLC, Land and Resource Assistance
- Capitol Strategies NV Government Liaison
- Furman Group US Government Liaison
- And many other Mesquite, State and Federal agencies



“For in the end, our society will be defined not only by what we create, but by what we refuse to destroy”

*John Sawhill, President & CFO,
The Nature Conservancy
1990-2000*





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