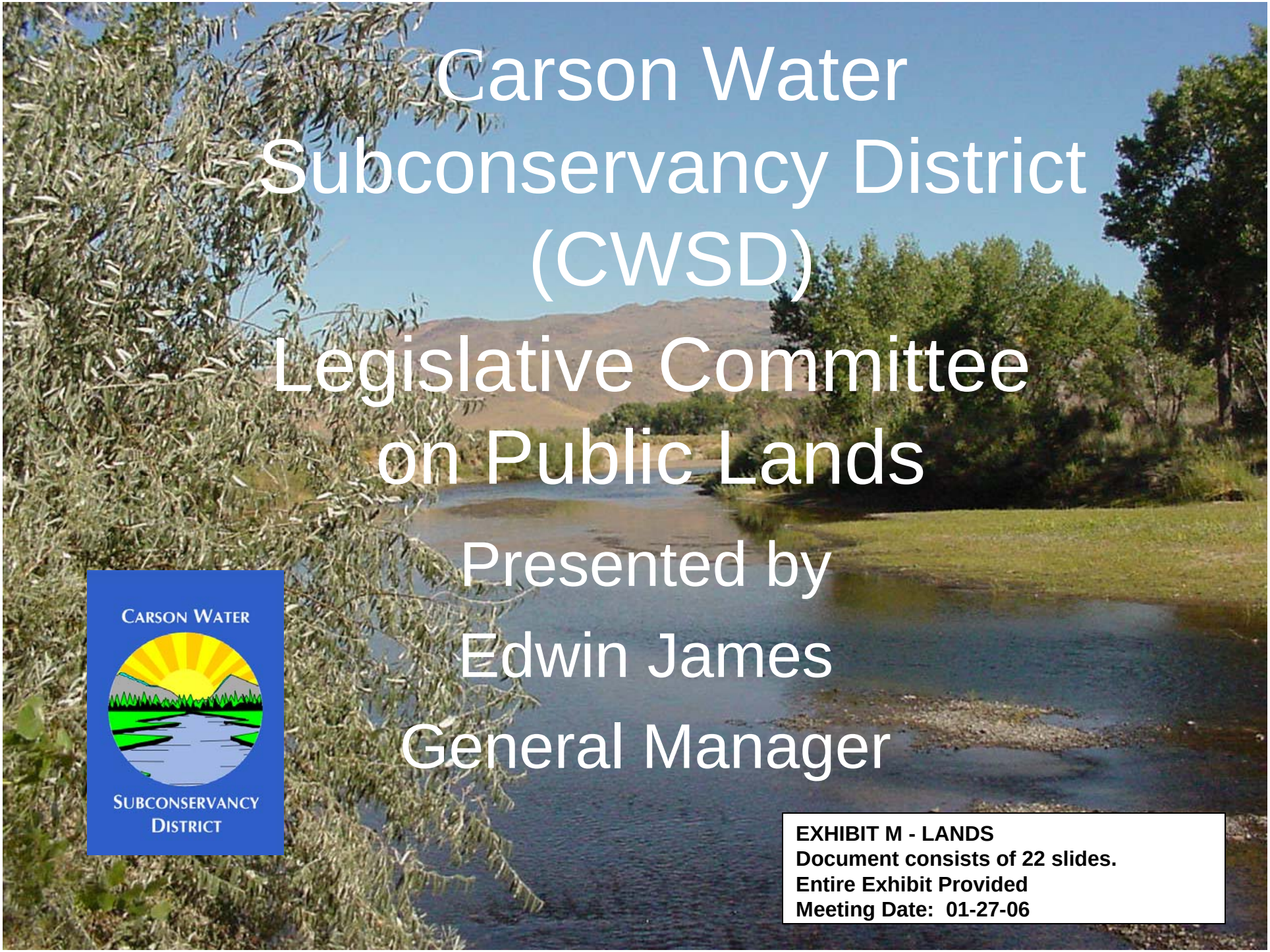


Carson Water Subconservancy District (CWSD)

Legislative Committee on Public Lands

Presented by

Edwin James

General Manager

CARSON WATER SUBCONSERVANCY DISTRICT

EXHIBIT M - LANDS
Document consists of 22 slides.
Entire Exhibit Provided
Meeting Date: 01-27-06

CWSD History

1959 CWSD Established by the Court

Purpose: Negotiate payback of debt on the Watasheamu Dam between the ranchers and Federal Government

1980's Fed. Gov't abandoned the Dam

1989 State changed the role of CWSD

1997 Flood Event

1998 Carson River Conference

- Integrated Watershed Planning

CWSD History Continued

- **1959** Douglas and Lyon Counties joined
- **1989** Carson City became a member
- **1999** Churchill County became a member
- **2001** Alpine County became a member

Structure of CWSD

- 13 Board Members
- 5 Counties
- 2 States (CA & NV)
- Funding (2005/06 Budget $1.45M)
  - Property Tax ($0.03/$100)
  - Grants (State, Fed., & others)

Carson River Watershed

- Encompasses apx. 3,966 square miles
- Carson River 184 miles long
- Current population estimation 125,000
- Predicted to reach over 457,000 by 2050

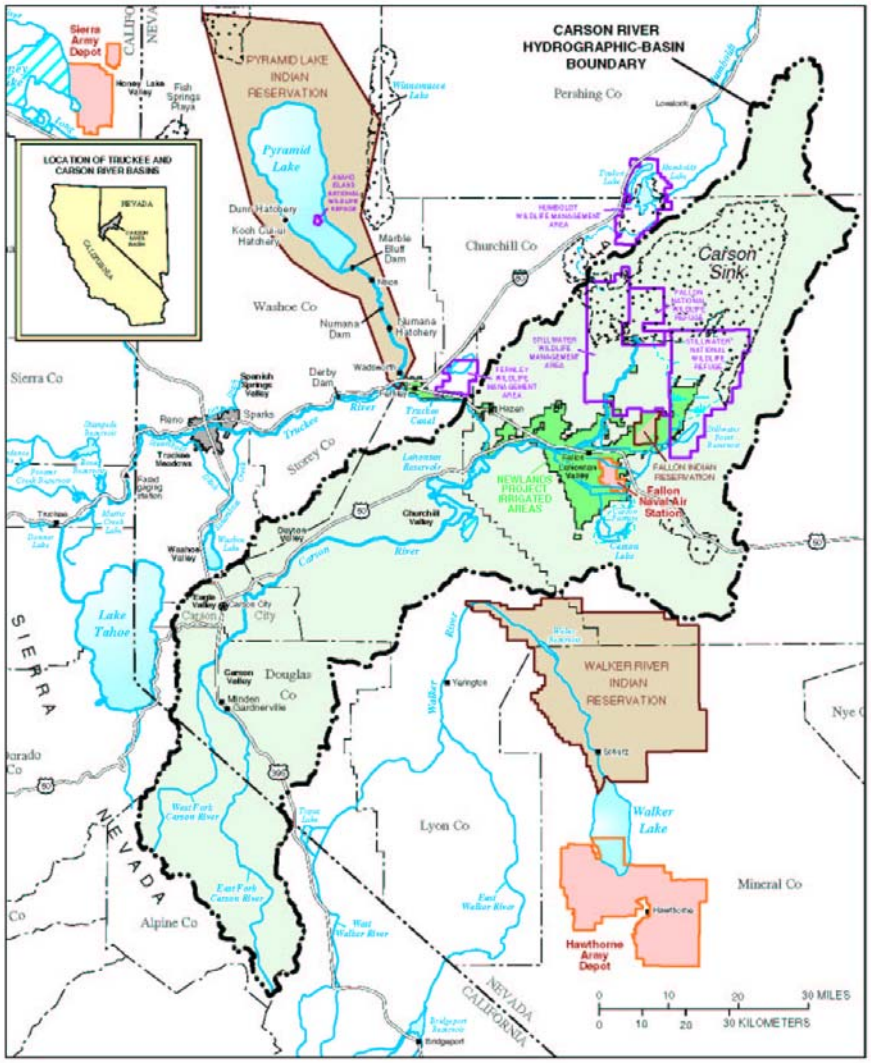
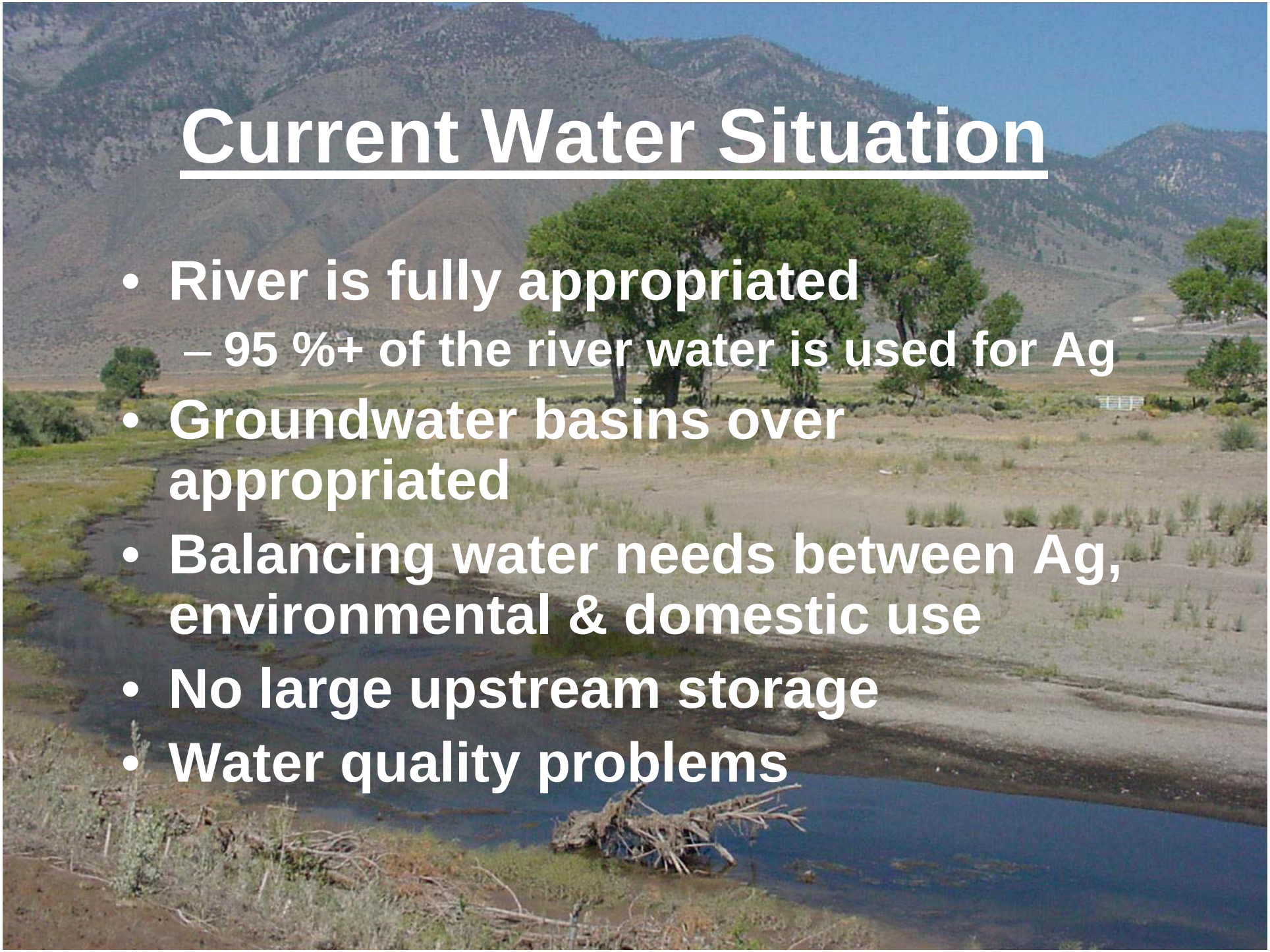


Figure1. USGS hydrologic features map of the Carson River watershed and surroundings.



Current Water Situation

- River is fully appropriated
  - 95 %+ of the river water is used for Ag
- Groundwater basins over appropriated
- Balancing water needs between Ag, environmental & domestic use
- No large upstream storage
- Water quality problems

Current Programs

- 208 Planning Agency for Carson River Basin
- Community Outreach and Education
- Our Lifeline in the Desert Watershed Map & Website
- AB 380 Water Buy-out Program
- River Restoration
- Noxious Weed Abatement

CARSON WATER SUBCONSERVANCY DISTRICT

Programs Con't

- Watershed Management Plan
- Water Quality Studies
- Wastewater Issues
- Floodplain Management Plan
- Habitat Enhancement
- Regional Water System

Floodplain Management Plan
why do we care?

- Riverside land periodically inundated by floodwaters
- Temporarily store floodwaters
- Natural filter - improves water quality
- Provides wildlife habitat
- Provides recreational opportunities


Photo: L. Crane

"Building in the floodplain is like setting your tent up on the highway when no cars are coming."

(Vicki Watson, University of Wisconsin)

Ranches to Subdivisions

Regional Water System Issues

- Groundwater resources in Alpine County
- Interaction between groundwater and surface water
- Conflict between upper and lower water users
- Limited water resources vs. demand for housing
- Over allocated groundwater resources

BALANCING WATER DEMANDS

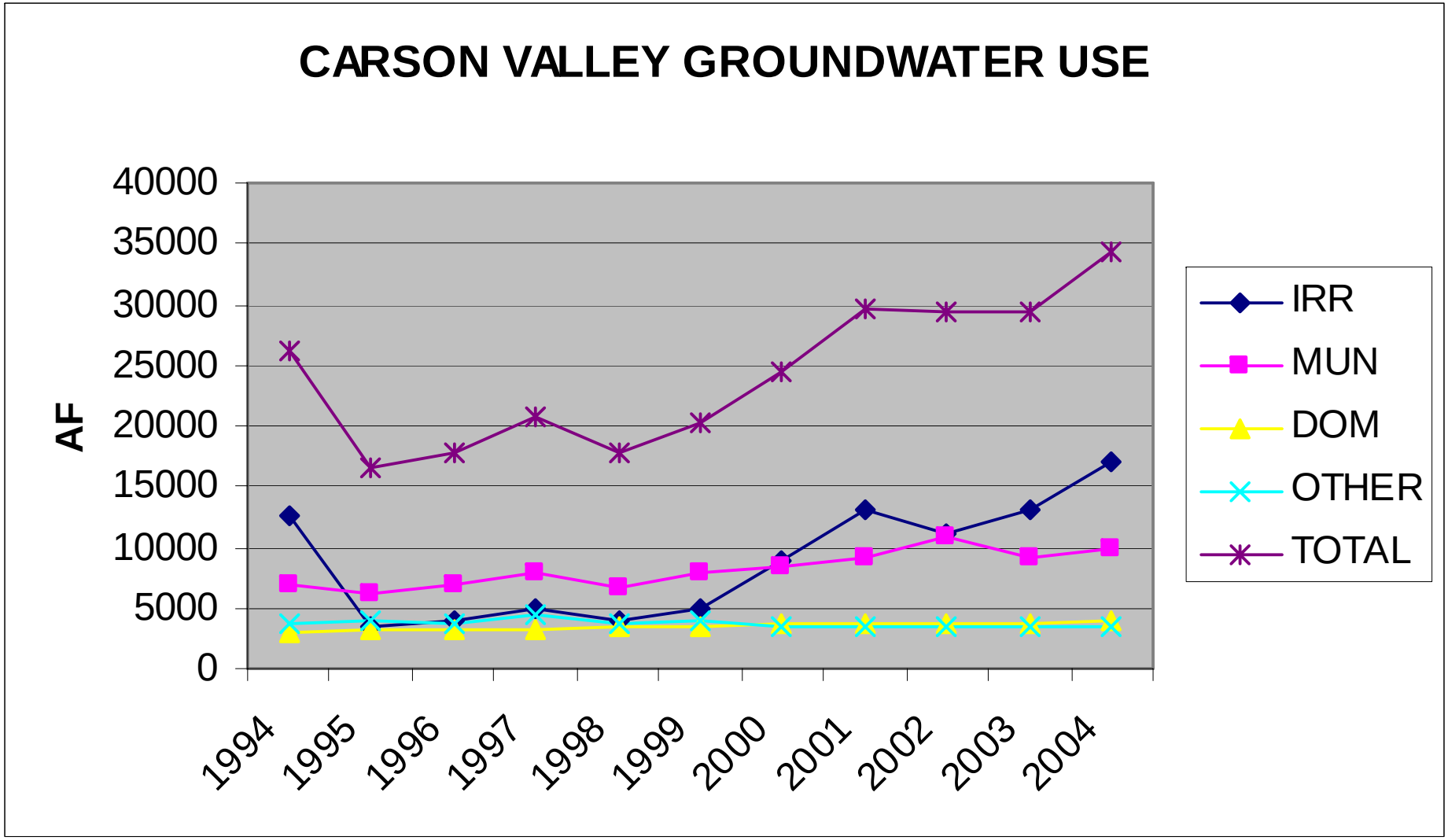
Environmental

Agricultural

Domestic

Regional Water System Issues (con't)

- Douglas County - Carson Valley
  - USGS Study – 70% Groundwater is surface water
- Carson City
  - Peaking Demands
- Lyon County
  - Water Supply
- Churchill County
  - All of the above


CARSON VALLEY GROUNDWATER USE
AF
40000
35000
30000
25000
20000
15000
10000
5000
0
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
IRR
MUN
DOM
OTHER
TOTAL

What are the options?

- Do nothing.
- Administer basins by priority date NRS 534.100 (6)

  "The State Engineer shall conduct investigations in any basin or portion thereof where it appears that the average annual replenishment to the ground water supply may not be adequate for the needs of all permittees and all vested-right claimants, and if his findings so indicate the State Engineer may order that withdrawals be restricted to conform with priority rights."
- Call for Proofs of Beneficial Use

Tools

- Designate ground water basins
  - Preferred uses
  - Allows the State Engineer to impose additional conditions and restrictions on water use e.g. well depths, meters, sanitary seals
  - A water right permit is required to drill a well (other than domestic) in a designated basin.
- Forfeiture
- Grant changes of irrigation use for consumptive portion only.
- Permit Terms and S.E.'s Orders requiring meters on diversions.
- Exchange of treated effluent for potable water

Tools

- Conjunctive Use through banking
- Recharge
- Request local water purveyors and governments to further restrict parceling and water dedication
- Monitor the Basins
  - Pumpage inventories
  - Groundwater level measurements
  - Public Input

What does administering the valley on a priority date basis mean?

In Dayton Valley, if groundwater pumping in the valley is limited to the annual yield of approximately 12,500 acre-feet, the annual duties of only 78 permits out of more than 240 could be satisfied.

Dayton Valley Groundwater Municipal Appropriations

Lyon County Utilities Municipal appropriations	9,028 AF
Lyon County Utilities appropriations available if administered by priority date	4,515 AF
Lyon County Utilities groundwater pumpage for calendar year 2004	2,767 AF
Carson City Utilities Municipal appropriations	2,332 AF
Carson City Utilities appropriations available if administered by priority date	70 AF
Carson City Utilities groundwater pumpage for calendar year 2003	1,748 AF

Active Groundwater Appropriations by Priority Date
Silver Springs Valley, 08-102

APP NO	STATUS	MOU	DUTY	UNIT	PRIORITY DATE	NON-ADJUSTED DUTY (AFA)	NON-ADJUSTED CUMULATIVE DUTY TOTAL	ADJUSTED TCD BY PRIORITY	ADJUSTED CUMULATIVE DUTY TOTAL
9906	CER	STK	2.56	MGA	10/24/1935	7.86	7.86	7.86	7.86
17107	CER	QM	15.80	MGA	11/29/1956	48.49	56.35	48.49	56.35
17306	CER	QM	1.12	MGA	6/17/1957	3.44	59.78	3.44	59.78
38152	CER	IRR	2.00	AFA	6/17/1957	2.00	61.78	2.00	61.78
66171	PER	QM	1.62	AFA	6/17/1957	1.62	63.40	1.62	63.40
19868	CER	IRR	366.00	AFA	5/24/1961	366.00	429.40	366.00	429.40
21800	CER	QM	289.58	AFA	2/7/1964	289.58	718.98	289.58	718.98
22724	CER	REC	23.59	MGA	8/13/1965	72.40	791.38	72.40	791.38
35025	CER	REC	2.80	MGA	8/13/1965	8.59	799.97	8.59	799.97
25345	CER	IRR	1925.29	AFA	11/4/1969	1925.29	2725.26	1925.29	2725.26
26778	CER	IRR	222.00	AFA	6/16/1972	222.00	2947.26	222.00	2947.26
53462	CER	IRR	2.00	AFA	6/16/1972	2.00	2949.26	2.00	2949.26
38225	CER	IRR	1093.20	AFA	8/25/1972	1093.20	4042.46	1093.20	4042.46
62912	PER	QM	74.60	AFA	6/21/1973	74.60	4117.06	74.60	4117.06
62913	PER	QM	74.60	AFA	6/21/1973	74.60	4191.66	74.60	4191.66
27664	CER	IRR	2250.99	AFA	7/30/1973	2250.99	6442.65	2250.99	6442.65
72385T	PER	IRR	180.95	AFA	2/8/1974	180.95	6623.60	180.95	6623.60
28380	CER	IRR	38.80	AFA	6/6/1974	38.80	6662.40	38.80	6662.40
28555	CER	IRR	220.00	AFA	7/29/1974	220.00	6882.40	220.00	6882.40
38968	CER	IRR	119.20	AFA	9/18/1974	119.20	7001.60	119.20	7001.60
65267	PER	QM	28.38	AFA	9/18/1974	28.38	7029.98	28.38	7029.98
38968R01	RLP	IRR	2.02	AFA	9/18/1974	2.02	7032.00	2.02	7032.00
30303	CER	REC	8.80	MGA	6/3/1976	27.01	7059.01	27.01	7059.01
30305	CER	REC	6.57	MGA	6/3/1976	20.16	7079.17	0.00	7059.01
35987	CER	REC	0.40	MGA	10/10/1978	1.23	7080.40	1.23	7060.24
66172	PER	QM	5.21	MGA	11/9/1979	15.99	7096.39	15.99	7076.23
52098	CER	COM	4.10	MGA	12/27/1979	12.58	7108.97	12.58	7088.81
45477	CER	QM	1.42	MGA	3/26/1982	4.36	7113.33	4.36	7093.17
46706	CER	STK	2.82	AFS	3/8/1983	2.82	7116.15	2.82	7095.99
46707	CER	STK	0.90	MGS	3/8/1983	0.90	7117.05	0.90	7096.89
46710	CER	QM	0.43	MGA	3/8/1983	1.32	7118.37	1.32	7098.21
46885	CER	STK	2.83	MGA	5/5/1983	8.68	7127.05	8.68	7106.89
46886	CER	STK	2.92	MGA	5/5/1983	8.96	7136.01	8.96	7115.85
46887	CER	STK	2.92	MGA	5/5/1983	8.96	7144.97	8.96	7124.81
46900	CER	STK	1.06	MGS	5/11/1983	1.06	7146.03	1.06	7125.87
49465	CER	STK	1.46	MGA	10/21/1985	4.48	7150.51	4.48	7130.35
51609	CER	COM	2.02	AFA	12/7/1987	2.02	7152.53	2.02	7132.37
52005	PER	MM	100.00	MGA	4/13/1988	306.89	7459.42	306.89	7439.26
54279	CER	QM	18.50	AFA	1/2/1990	18.50	7477.92	18.50	7457.76
36636	PER	QM	931.21	MGA	12/13/1990	2857.79	10335.71	2857.79	10315.55
36637	PER	QM	695.29	MGA	12/13/1990	2133.78	12469.49	469.13	10784.68
36638	PER	QM	695.29	MGA	12/13/1990	2133.78	14603.27	0.00	10784.68
36639	PER	QM	695.29	MGA	12/13/1990	2133.78	16737.04	0.00	10784.68
36640	PER	QM	221.19	MGA	12/13/1990	678.82	17415.86	0.00	10784.68
60749	PER	QM	38.08	AFA	12/13/1990	38.08	17453.94	0.00	10784.68
60751	PER	QM	38.08	AFA	12/13/1990	38.08	17492.02	0.00	10784.68
60752	PER	QM	38.08	AFA	12/13/1990	38.08	17530.10	0.00	10784.68
60753	PER	QM	38.08	AFA	12/13/1990	38.08	17568.18	0.00	10784.68
62586	PER	QM	38.08	AFA	12/13/1990	38.08	17606.26	38.08	10822.76
57077	PER	COM	6.00	AFA	1/13/1992	6.00	17612.26	6.00	10828.76
57078	PER	COM	6.00	AFA	1/13/1992	6.00	17618.26	0.00	10828.76
35318	CER	QM	4.57	MGA	3/4/1994	14.02	17632.28	14.02	10842.78
61304	PER	IND	35.00	AFA	6/9/1995	35.00	17667.28	35.00	10877.78
62849	PER	QM	3.94	MGA	2/10/1997	12.09	17679.37	12.09	10889.87
62850	PER	QM	3.94	MGA	2/10/1997	12.09	17691.46	0.00	10889.87
63258	PER	QM	46.93	AFA	7/18/1997	46.93	17738.39	46.93	10936.80
66173	PER	QM	8.07	AFA	7/18/1997	8.07	17746.46	8.07	10944.87
66634	PER	COM	2.02	AFA	8/3/2000	2.02	17748.48	2.02	10946.89
66656	PER	QM	2.02	AFA	8/9/2000	2.02	17750.50	2.02	10948.91
66724	PER	IND	2.02	AFA	8/21/2000	2.02	17752.52	2.02	10950.93
67637	PER	COM	2.02	NULL	6/4/2001	2.02	17754.54	2.02	10952.95
68243	PER	REC	2.02	AFA	11/29/2001	2.02	17756.56	2.02	10954.97
68766	PER	STK	4.84	AFA	5/2/2002	4.84	17761.40	4.84	10959.81
V09390	VST	STK	0.00	AFA	3/13/2003	0.00	17761.40	0.00	10959.81
70098	PER	COM	2.02	AFA	6/9/2003	2.02	17763.42	2.02	10961.83
71332	PER	COM	1.12	AFA	6/16/2004	1.12	17764.54	1.12	10962.95
66740	PER	IND	2.02	AFA	8/11/2004	2.02	17766.56	2.02	10964.97
						17766.56		10964.97	

CHURCHILL VALLEY GROUNDWATER BASIN
(Silver Springs Area)

Annual Recharge	1,600 AF
Total Water Appropriated	10,965 AF
Total Water Groundwater Pumped for Water Year 2005	2,175 AF
Silver Springs Water Company Appropriations	4,009 AF
Silver Springs Water Company Groundwater Pumped for Water Year 2005	719 AF
Silver Springs Water Company Appropriations Available if Administered by Priority Date	343 AF

Questions and Thank You!