Attachment E

Nevada State Engineer's Groundwater Management
Order 1161, Dated May 16, 2000

IN THE OFFICE OF THE STATE ENGINEER

OF THE STATE OF NEVADA

1161

GROUNDWATER BANKING ORDER

TRUCKEE MEADOWS GROUNDWATER BASIN

WHEREAS, under the provisions of Chapter 534 of the Nevada Revised Statutes (NRS) the State Engineer issued Order No. 708 in 1978, which designated the Truckee Meadows Groundwater Basin as a basin in need of additional administration (Hydrographic Basin 87)

WHEREAS, the State Engineer issued sixteen certificates for municipal use of groundwater within the Truckee Meadows Groundwater Basin to Sierra Pacific Power Company ("Sierra") in years prior to 1981 and recognized one claim of vested right (Attachment A). The total diversion rate of these rights is 66.8 cubic feet per second, and in 1986 the State Engineer imposed a pumping limit of 12,000 acre-feet per year on these pre-1981 groundwater certificates and one claim of vested right as being the limit and extent of the beneficial use Sierra also holds other permits and certificates for groundwater and surface water issued by the State Engineer for municipal purposes

WHEREAS, under the provisions of Chapter 534 of the Nevada Revised Statues (NRS) the State Engineer may issue Orders to manage certain groundwater as a "Bank", in which more water is extracted in some years than the stated duty of a groundwater permit, based on reduced extractions in other years.

WHEREAS, the Truckee River, which provides, on average, over 80% of the municipal water supply for customers in Sierra's service area, produces highly variable flows from year to year and endured the most severe drought on record between 1986 and 1994. During and immediately following this drought, Sierra implemented a preliminary conjunctive use operation, with the approval of the State Engineer, in which up to 15,728 acre-feet of groundwater was pumped during a severe drought year (1994), and as little as 7,744 acre-feet was pumped during a post-drought year (1998). The Truckee Meadows groundwater aquifer recovered fully after the drought

WHEREAS, the total population in Washoe County is projected to grow from 312,000 in 1998 to 418,000 in 2015. Future water demand projections indicate Sierra's water demand will increase from 68,000 acre-feet in 1998 to 85,000 acre-feet in 2015 Sierra's Water Resource Plan approved by the Regional Water Planning Commission and the Public Utilities Commission directs continued reliance on the Truckee River as the primary water supply for Sierra's service area, but recognizes that the River requires supplemental water from other sources during droughts

WHEREAS, Sierra has implemented management practices that reduce its use of groundwater during non-drought periods, including the construction of a year-round surface water treatment plant at Chalk Bluff to increase the use of Truckee River water during winter months; the execution of a contract for storage of water in Stampede Reservoir with the United States; and continued efforts to complete the Truckee River Operating Agreement, which will triple Sierra's drought reserves

WHEREAS, the State Engineer supports the conjunctive use of groundwater and surface water which allows for optimal use of surface water rights during years when surface water is available thereby allowing the Truckee Meadows Groundwater Basin to rest, in return for pumping additional groundwater during drought years when surface water availability is at a minimum.

NOW THEREFORE, the State Engineer orders and allows as follows:

1 Commencing on January 1, 2000, Sierra shall manage its Truckee Meadows Groundwater Basin rights as a banked resource under rules set forth in this Order The management provisions of this Order shall apply to all Truckee Meadows Groundwater Basin rights held by Sierra, whether from its Vested water rights and certificates listed in Attachment A or by subsequent acquisition or appropriation of ground water rights or domestic well credits Pumping from other water systems which Sierra may acquire and rights located in other hydrographic basins are not included in this Order

2. The baseline, or long-term average amount of groundwater Sierra may pump shall be 15,950 acre-feet per year, based on Sierra's 12,000 acre-foot administrative cap, an additional 1,105 acre-feet found by the State Engineer to have been beneficially used by Sierra under its pre-1981 certificates, 200 acre-feet allowance for domestic well credits owned by the Airport Authority, and 2,645 acre-feet of groundwater rights acquired prior to the date of this Order Any year in which Sierra pumps less than 15,950 acre-feet in the Truckee Meadows Groundwater Basin shall result in a credit to the Bank balance; pumping in excess of 15,950 acre-feet shall result in a debit against the Bank balance. Any amounts of water artificially recharged shall be credited to the Bank balance in accordance with the terms of the recharge permit. A hypothetical illustration of this accounting procedure is found in Attachment B.

3. The Bank set forth in Paragraph 2 shall be administered on a calendar year basis The beginning balance on January 1, 2000, shall be 1,799 acre-feet, representing the quantity of water Sierra had artificially recharged into the

Truckee Meadows Groundwater Basin under Permit No. 010 prior to that date.

4. Notwithstanding that the Bank balance may be larger than 22,000 acre feet in a future year, Sierra may pump a maximum of 22,000 acre-feet from the Truckee Meadows Groundwater Basin during any calendar year from the bank balance. Such volume of pumping shall not continue for more than three years in succession.

5. To the extent that year-round pumping is required for permitted environmental remediation or dewatering projects, and these projects discharge water into Sierra's system, pumping during the months of June through September shall be counted against Sierra's bank balance. During the remaining months of the year only ground water pumped in excess of that required for permitted environmental remediation or dewatering projects shall also be counted against Sierra's bank balance.

6 Based on 1,105 acre-feet of groundwater rights held by Sierra not previously allowed for pumping and a 200 acre-feet well credit for the Airport Authority, Sierra may issue will-serve commitments up to 1,305 acre-feet against its Truckee Meadows Groundwater Basin rights, pursuant to this Order.

7. The Truckee Meadows Groundwater Basin rights of Sierra Pacific Power Company shall not be subject to forfeiture under NRS 534 090 when operated in accordance with this Order In the Truckee Meadows Groundwater Basin cumulation and rotation procedures using all Sierra's groundwater rights may be utilized to allow a maximum flow rate greater than the diversion rate for any single water right provided that the total combined diversion rate authorized under all rights is not exceeded.

8. Sierra shall continue to abide by the "Groundwater Management Agreement" dated September 5, 1991 with Truckee-Carson Irrigation District unless it terminates by its terms

9. Sierra shall continue to monitor water levels and water quality and report to the State Engineer at the end of the calendar year with their results.

10. Sierra may petition the State Engineer to increase the baseline amount under Paragraph 2 and may petition to adjust the 22,000 acre-foot limit in Paragraph 4

11 The State Engineer retains the authority to limit Sierra's pumpage at any given location in the event that unreasonable drawdown or water quality degradation as a result of Sierra's pumping occurs

R. MICHAEL TURNIPSEED, P.E
State Engineer

Dated at Carson City, Nevada, this

16th day of May, 2000 .

ATTACHMENT A

Sierra Pacific Power Company Pre-1981 Groundwater Rights At Original Point of Diversion[1]

Permit	Certificate	Diversion Rate (cfs)	(Well)
V-05533		4.5[2]	Fourth Street
17585	5678	4.0	Stanford Way
17838	5365	4.0	Mill Street
18414	5292	6.0	Popular #1
19185	5677	3.3	Terminal
19909	5802	6 7	High Street
20207	5489	2.5	Mill Street
20371	6116	6.2	Morrill
20372	6573	4.7	Peckham
23847	7627	2.9	Poplar #2
23848	7623	2 9	Greg Street
24758	8274	2 2	S. Virginia
24869	8044	5.6	View Street
25997	8811	1.1	Delucchi Lane
26193	8939	5 5	Kietzke Lane
26310	8767	1.6	Sparks Ave
28055	10641	3 1	Pezzi
TOTAL		**66.8 cubic feet per second**	

[1] Many rights have been changed to new locations since certified
[2] Based on 2,000 gpm pump capacity

ATTACHMENT B
BANK ACCOUNTING ILLUSTRATION

Year	Description a	Baseline Pumping b	Annual Pumpage c	Recharge d	Credit/Debit (b-c+d) e	Ending Balance f
	Beginning Balance					1799
1	Non-Drought	15950	11000	1000	5950	7749
2	Non-Drought	15950	10500	1500	6950	14699
3	Non-Drought	15950	11000	1700	6650	21349
4	Non-Drought	15950	9000	1500	8450	29799
5	Drought	15950	22000	500	-5550	24249
6	Drought	15950	22000	750	-5300	18949
7	Drought	15950	22000	500	-5550	13399
8	Non-Drought	15950	12000	1700	5650	19049
9	Non-Drought	15950	8000	1000	8950	27999
10	Non-Drought	15950	10000	1200	7150	35149