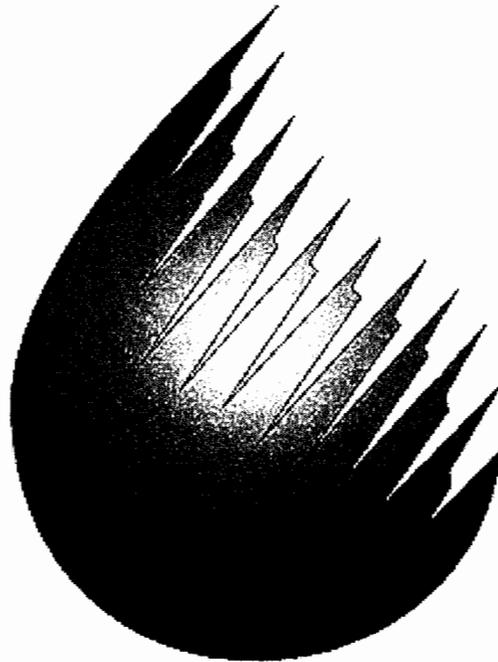


**Southern Nevada Water Authority**

# **CAPITAL IMPROVEMENTS PLAN**



**Amendment 16 issued May 18, 2006**

**First Issued December 4, 1995**

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## BACKGROUND AND HISTORY

In 1991, the Southern Nevada Water Authority (SNWA) was established in recognition of the importance of addressing water issues on a regional, rather than an individual purveyor, basis.

The members of SNWA are:

- City of Henderson
- City of North Las Vegas
- Las Vegas Valley Water District
- Big Bend Water District
- City of Boulder City
- City of Las Vegas
- Clark County Water Reclamation District

One of SNWA's primary purposes is to plan and provide for the present and future water needs of all area residents.

SNWA's existing water system that pumps, treats, and delivers Colorado River water from Lake Mead is known as the Southern Nevada Water System (SNWS) and was placed into operation in 1971. Since then, Southern Nevada has continually experienced exceptional growth. The result has been increasing demand on the water system and the need to build facilities to meet these demands and to provide system reliability.

The Southern Nevada Water Authority defined a program of water system improvements based on the following guiding statement:

*To develop a reliable and demand-responsive regional water system that will supplement the existing Southern Nevada Water System during periods of curtailed production or system failures; and provide the State of Nevada full access to its Colorado River water entitlement.*

Before embarking on a program of water system improvements, SNWA determined that an Integrated Resources Plan would be of benefit in looking critically and imaginatively at ways to achieve identified objectives and making sure that the citizens of Southern Nevada were full partners in the voyage. Thus, in 1994, SNWA formed an Advisory Committee composed of 24 community representatives to provide feedback in the creation of an Integrated Resources Plan. After months of discussion and consideration, the Advisory Committee issued a set of recommendations upon which the integrated Capital Improvements Plan was established.

A continuing public awareness program that emphasizes the wise use of water and water conservation remains a critical component in resources and facilities planning. A draft Environmental Impact Statement (EIS) that recommended a plan of construction sensitive to environmental concerns was published for public comment in November 1995. A Record of Decision was issued in November 1996.

## SCOPE OF THE SNWA CAPITAL IMPROVEMENTS PLAN

This SNWA Capital Improvements Plan (Plan) grew out of the Advisory Committee recommendations and the EIS. The Plan identifies the specific water system facilities to be constructed. The facilities are separated into four groups:

- Intake System Improvements.
- Water Treatment Improvements.
- Transmission System Improvements.
- Other Improvements (mainly power and communication systems).

The Plan covers a 30-year period from 1995 through 2025, and describes an additional planned water delivery capacity of 500 million gallons per day. The initial three-year period (1995 through 1997) focused on planning the program and designing and constructing improvements to the existing Southern Nevada Water System (SNWS). Subsequent phases of the Plan provide demand-based capacity when it is needed, operational flexibility, system reliability, and enhanced water treatment. This Plan minimizes cost impacts and provides a flexible and logical implementation strategy.

As set forth in the SNWS Facilities and Operations Agreement, the purpose of the Plan is to identify clearly, and in detail, the specific facilities that are proposed to be built, the year in which they are proposed to be completed, and an estimate of how much each will cost. The facility improvements described by the Plan are intended to provide a total water delivery of 900 million gallons per day (including the currently operating system). As projects are completed their costs are documented in the Plan.

The construction program set forth in the Plan demands a logical approach to plan, design, construct, and operate the facilities. In a program of this magnitude, these four activities overlap to some degree. The following summarizes the state of the program in May of 2006.

- All projects scheduled for completion through 2005 are now operational.
- Projects scheduled to be completed in 2006 are in various stages of construction.
- Projects scheduled to be completed in 2007 and later are in various stages of planning, design or construction.

## ORGANIZATION OF THE PLAN

The Plan is defined by a series of tables. These tables describe each project or facility improvement, provide a comprehensive look at the capital budgets needed for each project, and identify the year the facilities are needed. The order in which facilities are to be constructed is the result of a careful analysis designed to have facilities operational at the time they are needed, in proper sequence, and at minimum cost. A map depicting the location of the major facilities accompanies the Plan.

In the tables which follow:

- Each facility's phase is identified on a separate page by year.
- The stated year is the year in which construction or purchase of the facilities' components are to be complete and operational.
- The projects are grouped within each year, according to:
  - Intake System Improvements
  - Water Treatment Improvements
  - Transmission System Improvements
  - Other Improvements
- The project numbers are project identifiers used in the administration of project contracts.
- The capacity shown in million gallons per day (mgd) or million gallons (MG) indicates the capacity added by that construction phase and the resulting total facility capacity.
- The cost is total cost: design, construction, and contingency.
- Land acquisition capital costs are listed separately. Indirect costs are also listed separately and include program design and construction management services, lead design engineer services, legal and financial services, land acquisition services, environmental mitigation, and start-up services.
- Costs are in dollars, actual costs for completed projects and escalated to the midpoint of construction for active and future projects.
- At the bottom of each page is the total cost of the facilities scheduled to be completed in that phase.

The appendices provide additional information:

- Appendix A is a list of Candidate Projects that are part of the Plan but not yet approved for funding.
- Appendix B is a Cash Flow Summary, actual and projected.
- Appendix C is a historical summary of funding. It covers the original Plan and the subsequent amendments.
- Appendix D is a Capacity/Demand/Cash Flow chart for the SNWA system.
- Appendix E is a detailed list of cost changes that have taken place since the last approved amendment.

This Capital Improvements Plan is periodically revised in response to future reliability, water quality, water capacity, and water resource needs. The SNWS Facilities and Operations Agreement defines the requirements to revise the Plan. The Plan will be reviewed on a regular basis and adjusted, as necessary, based on updated projections of future needs. Updates to the Plan will summarize the current state of the Plan, highlight changes from the previous published Plan, and contain revised tables which illustrate the current costs and direction of the Plan. The change in total costs will be explained.

### **May 2006 Amendment**

The Plan identifies two costs: authorized funding and a forecast of final costs. The authorized funding remains \$2,748.4 million. The forecast of final costs is increased by \$11.4 million, from \$2,636.7 million to \$2,648.1 million. The forecast of final costs is \$100.3 million less than the authorized funding.

The net Plan increase of \$11.4 million is the result of both increases and decreases to project cost forecasts.

Increases to the forecast are the result of adjustments to the costs of approved projects. The Raw Water Pumping System project has been appended with additional costs for pump enhancements as part of warranty replacement of ten existing pumps. The Raw Water Pumping System Expansion project has additional costs for lowering the intake pumps to deal with lower lake levels. Other increases are a result of conditions discovered during design or encountered during construction. These changes, along with administrative cost increases, amount to an overall increase to the forecast of \$15.4 million.

Decreases to the forecast are the result of adjustments to the costs of approved projects, including adjustment of costs for the upcoming close-out of three construction contracts and the completed close-out of three other projects. The largest decrease was the result of an innovative design solution for the North Lateral Turnout Expansion project. These changes, along with other minor reductions in forecasts, result in a decrease of \$4.0 million.

Three projects have been moved from forecast completion in 2005 to forecast completion in 2006. They include the Raw Water Pumping System Expansion, the Alfred Merritt Smith Water Treatment Facility Process Improvements, and the River Mountains Water Treatment Facility Expansion. The project for Disinfection Facilities: Horizon/Parkway/Bermuda has been rescheduled to 2011 pending further evaluation of need.

### **Appendix E lists all cost adjustments by project.**

With the changes in total costs reflected in this amendment, the cumulative savings-to-date are estimated to be \$100.3 million. These savings are available for additional projects, for redefined projects, or as a reduction to the overall cost of the program.



**CAPITAL IMPROVEMENTS PLAN  
TABLE OF PROJECTS AND COST ESTIMATES**

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**Abbreviations**

<b>AMS</b>	- Alfred Merrit Smith
<b>BPS</b>	- Booster Pumping Station
<b>CRC</b>	- Colorado River Commission
<b>EVL</b>	- East Valley Lateral
<b>GAC</b>	- Granular Activated Carbon
<b>HWL</b>	- High Water Level
<b>IPS</b>	- Intake Pumping Station
<b>MG</b>	- Million Gallons
<b>mgd</b>	- Million Gallons per Day
<b>NPC</b>	- Nevada Power Company
<b>NVL</b>	- North Valley Lateral
<b>PS</b>	- Pumping Station
<b>RM</b>	- River Mountains
<b>ROFC</b>	- Rate of Flow Control Station
<b>SNWS</b>	- Southern Nevada Water System
<b>SVL</b>	- South Valley Lateral
<b>WTF</b>	- Water Treatment Facility

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**Project Status Legend**

<b>F</b>	- Future Project
<b>P</b>	- Planning
<b>D</b>	- Design
<b>C</b>	- Construction
<b>O</b>	- Complete and Operational

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**Notes**

Costs are rounded to nearest \$100,000. Detailed costs available from SNWA Engineering Program Administration Manager at 862-3400.

Subtotals shown are summation of detailed project costs and may vary slightly from total of project costs shown due to rounding.

Final costs for projects with status "O" (complete and operational) are shown in bold.

Projects as listed may be subdivided into one or more contracts, or alternately, individual projects may be combined for design and construction where warranted by schedule or constructability issues.

**General**  
**(Non-Project Specific)**

**TOTAL COST**  
**(Millions)**

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<b>Planning/EIS</b>	\$39.5
<b>SNWA Administration</b> <i>(through June, 2008)</i>	\$55.1

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<b>Subtotal</b>	<b>\$94.6</b>
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**Total Number of Components = 2**

**TOTAL** **\$94.6**

Facility Type		Status	TOTAL COST	
Project No. and Description			(Millions)	
<b>Intake System Improvements</b>				
L11	Low Lift Pumping Station	O	\$1.5	
	Indirect Costs		<u>\$0.3</u>	
			<i>Subtotal</i>	\$1.8
<b>Water Treatment Improvements</b>				
B01	Batch Plant at AMSWTF	O	\$1.7	
D01	Scrubber Prepurchase at AMSWTF	O	\$0.0 *	
D11	Disinfection Facilities Upgrades at AMSWTF	O	\$3.9	
F11	Filter Additions at AMSWTF	O	\$10.6	
P11	Plant Improvements at AMSWTF	O	\$8.8	
P12	Plant Mass Excavation at AMSWTF	O	\$0.6	
	Indirect Costs		<u>\$6.6</u>	
			<i>Subtotal</i>	\$32.2
<b>Transmission System Improvements</b>				
H01	Hacienda Pumps Prepurchase	O	\$0.0 **	
M11	Gibson Lateral (48" - 2.0 miles)	O	\$5.2	
R11	RM Tank (46 MG)	O	\$15.2	
R12	RM Tank Mass Excavation	O	\$1.8	
S11	Simmons Pumping Station (71 mgd)	O	\$8.6	
T01	Valve Prepurchase	O	\$1.0	
T11	RM Tunnel (144" - 4.0 miles)	O	\$19.7	
T12	RM Tunnel Portal Connection	O	\$13.1	
T13	RM Regulating Tank Mass Excavation	O	\$1.3	
W11A	West Valley Lateral (60" - 3.3 miles) - Section A	O	\$16.7	
W11B	West Valley Lateral (60" - 2.9 miles) - Section B	O	\$14.8	
	Indirect Costs		<u>\$25.3</u>	
			<i>Subtotal</i>	\$122.7
<b>Other Improvements</b>				
10010C	Substation Mass Excavation	O	\$6.6	
C11	Communications	O	\$1.2	
	Operational Decision Support System	O	\$1.2	
	Indirect Costs		<u>\$2.0</u>	
			<i>Subtotal</i>	\$11.0
<b>Total Number of Components = 21</b>		<b>TOTAL</b>	<b>\$167.7</b>	

\* Equipment costs were paid as part of D11

\*\* Equipment costs were paid as part of S11

Facility Type Project No. and Description	Status	TOTAL COST (Millions)
<b>Intake System Improvements</b>		<u>\$0.0</u>
<i>Subtotal</i>		<b>\$0.0</b>
<b>Water Treatment Improvements</b>		
08010K East C-1 Detention Basin	O	\$6.8
08010L Chemical Containment System at AMSWTF	O	\$1.6
Indirect Costs		<u>\$0.7</u>
<i>Subtotal</i>		<b>\$9.1</b>
<b>Transmission System Improvements</b>		
11010A RM Lateral (72" - 3.8 miles)	O	\$8.4
11010B SVL - Major Crossings	O	\$4.5
11010C SVL (108" - 9.8 miles)	O	\$20.8
11010D Foothills 2210 PS (140 mgd)	O	\$17.7
11010E RM 2530 PS (140 mgd)	O	\$21.7
11010G Horizon Ridge 2375 Resv (10 MG), SV Regul Resv (4 MG)	O	\$9.8
11010H SVL (90" - 5.0 miles, 54" - 0.2 miles)	O	\$12.1
11010I SVL - MacDonald Ranch (108"- 1.1 miles)	O	\$5.1
11010K SVL (84" - 6.8 miles)	O	\$17.6
11010L Burkholder 2210 Regulating Reservoir (25 MG)	O	\$13.0
11010M ROFCs	O	\$6.9
11010P Pipe Prepurchase (108")	O	\$23.5
11010Q Pipe Prepurchase - 11010H Phase I (90")	O	\$1.5
11010R SV Regul Resv Inlet/Outlet Pipeline (90"- 0.6 miles, 54"- 0.2 miles)	O	\$2.2
11010S SVL - MacDonald Ranch Extension (108" - 0.4 miles)	O	\$1.7
11010W SVL - Disinfection	O	\$0.5
11010X Black Mountain ROFC (25 mgd)	O	\$2.6
11010Z R-8 Lateral (24" - 0.8 miles)	O	\$1.0
12010A SNWS Phase II Mass Excavation	O	\$2.1
12010B SNWS Phase II System "C" (225 mgd) ( 27 MG)	O	\$66.6
Land Acquisition (Capital Costs)		\$5.8
Indirect Costs		<u>\$22.0</u>
<i>Subtotal</i>		<b>\$267.1</b>
<b>Other Improvements</b>		
10010Z CRC Power Development (Phase I)	O	\$44.3
11010J SVL Communications	O	\$2.6
11010T SVL Controls	O	\$1.0
Indirect Costs		<u>\$0.2</u>
<i>Subtotal</i>		<b>\$48.1</b>

Total Number of Components = 25

**TOTAL****\$324.3**

Facility Type Project No. and Description	Status	TOTAL COST (Millions)	
<b>Intake System Improvements</b>		<u>\$0.0</u>	
<i>Subtotal</i>			<b>\$0.0</b>
<b>Water Treatment Improvements</b>			
08010C Ozone Addition to AMSWTF (Pre-Design)	O	\$0.6	
08010D Site Preparation for Ozone Addition to AMSWTF	O	\$3.6	
Indirect Costs		<u>\$0.3</u>	
<i>Subtotal</i>			<b>\$4.5</b>
<b>Transmission System Improvements</b>			
13010A EVL - Hollywood/DI to Sloan PS (78" - 2.7 miles)	O	\$18.5	
13010B EVL - Sloan PS to Las Vegas Blvd. (78" - 5.7 miles)	O	\$18.3	
13010C EVL - Las Vegas Blvd. to Lamb PS (78" - 4.5 miles)	O	\$15.3	
13010D Sloan 2160 PS (20 mgd)/Structure (175 mgd)	O	\$27.6	
13010E Lamb 2350 PS (20 mgd)/Structure (175 mgd)	O	\$22.9	
13010F Grand Teton 2330 Reservoir (10 MG)	O	\$10.6	
13010I Disinfection Facilities: Carlton Square/Twin Lakes	O	\$2.9	
13010W EVL Disinfection	O	\$0.3	
Land Acquisition (Capital Costs)		\$7.2	
Indirect Costs		<u>\$13.4</u>	
<i>Subtotal</i>			<b>\$137.0</b>
<b>Other Improvements</b>			
10010M NPC Connections to Sloan PS and Lamb PS	O	\$1.3	
13010J EVL Communications	O	\$2.1	
13010T EVL Controls	O	\$0.5	
Indirect Costs		<u>\$0.2</u>	
<i>Subtotal</i>			<b>\$4.1</b>

Total Number of Components = 13

**TOTAL****\$145.6**

<b>Facility Type</b>		<b>STATUS</b>	<b>TOTAL COST</b>
Project No. and Description			(Millions)
<hr/>			
<b>Intake System Improvements</b>			<u>\$0.0</u>
	<b>Subtotal</b>		\$0.0
<hr/>			
<b>Water Treatment Improvements</b>			<u>\$0.0</u>
	<b>Subtotal</b>		\$0.0
<hr/>			
<b>Transmission System Improvements</b>			<u>\$0.0</u>
	<b>Subtotal</b>		\$0.0
<hr/>			
<b>Other Improvements</b>			
10020A CRC Power Development Project (Phase II)		O	\$11.3
10020B CRC Power Development Project (Phase III)		O	\$13.7
Indirect Costs			<u>\$0.0</u>
	<b>Subtotal</b>		<b>\$25.0</b>
<hr/>			

**Total Number of Components = 2**

**TOTAL**

**\$25.0**

Facility Type		Status	TOTAL COST (Millions)
Project No. and Description			
<b>Intake System Improvements</b>			
07010A	Lake Mead Intake No. 2 (100 mgd)	O	\$90.3
07010B	Raw Water Pumping System (108" - 2.0 miles 100 mgd)	O	\$124.2
07010C	RM Aqueduct (108" - 3.2 miles)	O	\$15.6
07010E	BWC Pipeline Relocation	O	\$0.6
	Indirect Costs		<u>\$25.1</u>
	<i>Subtotal</i>		<b>\$255.8</b>
<b>Water Treatment Improvements</b>			
08010A	RMWTF Direct Filtration (150 mgd); Ozone at RMWTF (150 mgd); Clearwell Exp. (25 MG/50 MG total)	O	\$232.0
08010H	AMSWTF Modulating Weirs	O	\$0.3
08010M	Magic Way RMWTF Entrance Improvements	O	\$0.5
08010N	RMWTF Temporary Fluoridation	O	\$1.1
	Indirect Costs		<u>\$24.4</u>
	<i>Subtotal</i>		<b>\$258.3</b>
<b>Transmission System Improvements</b>			
13510A	Boulder City Water Delivery Improvements (30" - 7.0 miles, 10 mgd)	O	\$20.9
14010A	NVL - Washburn Rd to Decatur 2350 Res. (24" to 72" - 6.0 miles)	O	\$9.8
14010B	Carlton Sq. Lateral, Cole Ave to Washburn Rd (42" - 3.9 miles)	O	\$8.8
14010C	Gowan 2350 PS (24 mgd)	O	\$7.1
14010D	Decatur 2350 Reservoir (20 MG)	O	\$10.0
14010E	Deer Springs ROFC (80 mgd)	O	\$3.7
14010G	College ROFC (25 mgd)	O	\$3.2
	Land Acquisition (Capital Costs)		\$2.4
	Indirect Costs		<u>\$7.1</u>
	<i>Subtotal</i>		<b>\$73.0</b>
<b>Other Improvements</b>			
08010J	Intake System and RMWTF Communications	O	\$2.4
10510A	NPC - Leased Fiber Optic Systems - Phase I	O	\$0.7
14010J	NVL - Communications	O	\$2.0
14010T	NVL - Controls	O	\$0.5
	Indirect Costs		<u>\$0.2</u>
	<i>Subtotal</i>		<b>\$5.8</b>

Total Number of Components = 19

**TOTAL****\$592.9**

Facility Type		Status	TOTAL COST (Millions)
Project No. and Description			
<b>Intake System Improvements</b>			
07010D	Low Lift PS Improvements (Phase I)	O	\$3.0
07210B	Low Lift PS Improvements (Phase II)	O	\$2.6
	Indirect Costs		<u>\$0.7</u>
<i>Subtotal</i>			<b>\$6.3</b>
<b>Water Treatment Improvements</b>			
08010B	Prepurchase Oxygen/Ozone Equipment (AMSWTF & RMWTF)	O	\$16.3
08010ER	Ozone Addition to AMSWTF (600 mgd)	O	\$81.6
	Indirect Costs		<u>\$12.7</u>
<i>Subtotal</i>			<b>\$110.6</b>
<b>Transmission System Improvements</b>			
14010F	Foothills PS Turbine Project	O	\$2.4
17010C	NVL - Grand Teton Drive to Beltway (60" - 2.4 miles)	O	\$8.1
17010G	NVL - Beltway Crossing (60" - 0.4 miles)	O	\$2.5
17010H	NVL - Decatur 2538/2430 PS to Grand Teton Drive (60" - 2.5 miles)	O	\$5.2
	Land Acquisition (Capital Costs)		\$0.6
	Indirect Costs		<u>\$2.5</u>
<i>Subtotal</i>			<b>\$21.4</b>
<b>Other Improvements</b>			
08010T	Intake System and RMWTF Controls	O	\$4.1
08010W	AMSWTF Ozone Controls	O	\$0.6
10510B	NPC - Leased Fiber Optic Systems - Phase II	O	\$2.7
	Indirect Costs		<u>\$0.2</u>
<i>Subtotal</i>			<b>\$7.6</b>
<b>Total Number of Components = 11</b>		<b>TOTAL</b>	<b>\$145.9</b>

Facility Type Project No. and Description	Status	TOTAL COST (Millions)
<b>Intake System Improvements</b>		
<i>Subtotal</i>		<u>\$0.0</u> \$0.0
<b>Water Treatment Improvements</b>		
08010V Ozone Training and Start-up Services	O	\$1.1
<i>Subtotal</i>		<u>\$1.1</u>
<b>Transmission System Improvements</b>		
16010A RM PS B (175 mgd/315 mgd total), and Clearwell Expansion C (25 MG/75 MG total)	O	\$37.3
17010B NVL - Grand Teton 2330 Res. to Valley Drive (72" - 7.0 miles)	O	\$18.7
17010D Sloan 2160 (91 mgd/111 mgd total) and Lamb 2350 (91 mgd/111 mgd total) PS Expansion	O	\$13.1
17010F Decatur 2538/2430 PS (54 mgd-2538, 27 mgd-2430/Structure 105 mgd)	O	\$26.3
17010K Valley Drive Isolation Valve	O	\$0.5
Land Acquisition (Capital Costs)		\$0.2
Indirect Costs		<u>\$12.6</u>
<i>Subtotal</i>		<u>\$108.7</u>
<b>Other Improvements</b>		
10010P NPC Connection to Decatur 2538 PS	O	\$0.0
10010Q CRC RM PS Expansion Power Supply	O	\$1.6
17010J EVL and NVL Communications Improvements	O	\$0.4
Indirect Costs		<u>\$0.2</u>
<i>Subtotal</i>		<u>\$2.2</u>

Total Number of Components = 9

**TOTAL****\$112.0**

Facility Type Project No. and Description	Status	TOTAL COST (Millions)	
<b>Intake System Improvements</b>			
		<u>\$0.0</u>	
	<i>Subtotal</i>		\$0.0
<b>Water Treatment Improvements</b>			
08210B RMWTF Prepurchase Ozone Equipment (150 mgd/300 mgd total)	O	\$5.5	
Indirect Costs		<u>\$0.8</u>	
	<i>Subtotal</i>		\$6.3
<b>Transmission System Improvements</b>			
13010K EVL Interconnections	O	\$5.4	
17010A EVL - River Mtns. Res. to Desert Inn Rd. (78" - 8.2 miles)	O	\$42.1	
19010A Horizon Ridge 2375 Reservoir Expansion (10 MG/20 MG total)	O	\$10.0	
Land Acquisition (Capital Costs)		\$0.1	
Indirect Costs		<u>\$7.8</u>	
	<i>Subtotal</i>		\$65.4
<b>Other Improvements</b>			
		<u>\$0.0</u>	
	<i>Subtotal</i>		\$0.0

Total Number of Components = 4

**TOTAL****\$71.7**

<b>Facility Type</b>			<b>TOTAL COST</b>
Project No. and Description	Status		(Millions)
<b>Intake System Improvements</b>			
07210A Raw Water Pumping System Expansion (200 mgd RMWTF + 160 mgd AMSWTF/460 mgd total)	C	\$66.4	
07210C Intake No. 2 to AMSWTF By-pass Pipeline		\$15.2	
Indirect Costs		<u>\$11.0</u>	
		<b>Subtotal</b>	\$92.6
<b>Water Treatment Improvements</b>			
08010F AMSWTF Process Improvements	C	\$56.7	
08210A RMWTF Expansion (150 mgd/300 mgd total)	C	\$79.7	
Indirect Costs		<u>\$13.7</u>	
		<b>Subtotal</b>	\$150.1
<b>Transmission System Improvements</b>			
15010A RM 2530 PS Equestrian Pump Addition (7 mgd/14 mgd total)	C	\$0.9	
Indirect Costs		<u>\$0.1</u>	
		<b>Subtotal</b>	\$1.0
<b>Other Improvements</b>			
		<u>\$0.0</u>	
		<b>Subtotal</b>	\$0.0

Total Number of Components = 6

**TOTAL****\$243.7**

Facility Type Project No. and Description	Status	TOTAL COST (Millions)	
<b>Intake System Improvements</b>		<u>\$0.0</u>	
	<i>Subtotal</i>		\$0.0
<b>Water Treatment Improvements</b>		<u>\$0.0</u>	
	<i>Subtotal</i>		\$0.0
<b>Transmission System Improvements</b>			
17010L In-Valley Isolation Valves	C	\$4.3	
Indirect Costs		<u>\$0.5</u>	
	<i>Subtotal</i>		\$4.8
<b>Other Improvements</b>		<u>\$0.0</u>	
	<i>Subtotal</i>		\$0.0

Total Number of Components = 1

**TOTAL**

**\$4.8**

<b>Facility Type</b>			<b>TOTAL COST</b>
Project No. and Description	Status		(Millions)
<b>Intake System Improvements</b>			
07011B Raw Water Pumping System - Warranty	D	\$4.5	
Indirect Costs		<u>\$0.6</u>	
	<b>Subtotal</b>		\$5.1
<b>Water Treatment Improvements</b>			
	<b>Subtotal</b>	<u>\$0.0</u>	\$0.0
<b>Transmission System Improvements</b>			
19010B Gilespe Turnout and ROFC Station (60 mgd)	D	\$10.0	
19010C Magic ROFC (15 mgd)	P	\$5.6	
Indirect Costs		<u>\$1.8</u>	
	<b>Subtotal</b>		\$17.4
<b>Other Improvements</b>			
	<b>Subtotal</b>	<u>\$0.0</u>	\$0.0

Total Number of Components = 3

**TOTAL****\$22.5**

Facility Type Project No. and Description	Status	TOTAL COST (Millions)	
<b>Intake System Improvements</b>			
07010F Lake Mead Intake No. 3	P	\$556.4	
Indirect Costs		<u>\$93.6</u>	
<b>Subtotal</b>			\$650.0
<b>Water Treatment Improvements</b>			
<b>Subtotal</b>		\$0.0	\$0.0
<b>Transmission System Improvements</b>			
13010H Disinfection Facilities: Horizon/Parkway/Bermuda	D	\$3.5	
Indirect Costs		<u>\$0.6</u>	
<b>Subtotal</b>			\$4.1
<b>Other Improvements</b>			
<b>Subtotal</b>		\$0.0	\$0.0

Total Number of Components = 2

**TOTAL****\$654.1**

Facility Type Project No. and Description	Status	TOTAL COST (Millions)	
<b>Intake System Improvements</b>		<u>\$0.0</u>	
<i>Subtotal</i>			\$0.0
<b>Water Treatment Improvements</b>		<u>\$0.0</u>	
<i>Subtotal</i>			\$0.0
<b>Transmission System Improvements</b>			
20010A Sloan 2160 PS Expansion (64 mgd/175 mgd total)	F	\$12.6	
20010B Lamb 2350 PS Expansion (64 mgd/175 mgd total)	F	\$7.9	
20010C Decatur 2538 PS Expansion (24 mgd/78 mgd total)	F	\$7.9	
20010D Decatur 2350 Reservoir Expansion (10 MG/30 MG total)	F	\$9.8	
Indirect Costs		<u>\$5.4</u>	
<i>Subtotal</i>			\$43.6
<b>Other Improvements</b>		<u>\$0.0</u>	
<i>Subtotal</i>			\$0.0

Total Number of Components = 4

**TOTAL**

**\$43.6**

**GRAND TOTAL**

**\$2,648.1**

**APPENDIX A  
CANDIDATE PROJECTS**

Project	Year	Status	TOTAL COST (Millions)
	<b>2010</b>		
Decatur Reservoir Outlet Pipeline		F	\$1.9
AMSWTF GAC Addition (600 mgd)		F	\$297.2
RMWTF GAC Addition (300 mgd)		F	\$244.5
AMSWTF GAC Communications and Controls		F	\$0.8
RMWTF GAC Communications and Controls		F	\$1.7
		<b>Subtotal</b>	<b>\$546.1</b>

**Total Number of Components = 5**

**TOTAL**

**\$546.1**

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**APPENDIX B  
SUMMARY CASH FLOW TABLE  
SOUTHERN NEVADA WATER AUTHORITY  
CAPITAL IMPROVEMENTS PROGRAM**

(Thousands of Dollars)

PERIOD	CIP PHASE														Dollars (\$)		Percent (%)
	GEN	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2011	2014	Annual	Cumul.	Annual
01/94 - 12/94	7,740	3,037	0	0	0	0	0	0	0	0	0	0	0	0	10,777	10,777	0.4%
01/95 - 12/95	9,785	25,701	6,888	0	0	0	0	0	0	0	0	0	0	0	42,374	53,151	1.6%
01/96 - 12/96	8,152	103,703	35,479	1,077	0	261	0	0	0	0	0	0	0	0	148,672	201,823	5.6%
01/97 - 12/97	15,661	32,972	121,853	7,446	0	20,692	1,234	0	0	0	0	0	0	0	199,858	401,681	7.5%
01/98 - 12/98	3,404	314	135,267	53,913	0	48,661	5,142	0	0	0	0	0	0	0	246,701	648,382	9.3%
01/99 - 12/99	3,432	1,441	21,150	70,446	4,930	157,550	25,640	49	313	0	0	0	316	0	285,267	933,649	10.8%
01/00 - 12/00	3,953	392	1,212	10,334	11,222	182,896	39,087	1,370	728	433	0	0	4	0	251,631	1,185,280	9.5%
01/01 - 12/01	5,114	0	2,128	2,150	8,856	105,973	24,861	4,376	2,169	7,612	0	0	0	0	163,239	1,348,519	6.2%
01/02 - 12/02	6,303	0	315	0	0	72,080	28,721	27,285	677	10,312	0	0	0	0	145,693	1,494,212	5.5%
01/03 - 12/03	5,863	0	0	0	0	4,258	17,451	54,641	25,277	21,526	0	0	0	0	129,016	1,623,228	4.9%
01/04 - 12/04	6,714	0	0	0	0	531	2,307	23,153	30,610	69,748	0	0	0	0	133,063	1,756,291	5.0%
01/05 - 12/05	6,924	0	0	0	0	0	169	749	10,211	63,503	286	0	1,589	0	83,431	1,839,722	3.2%
01/06 - 12/06	6,969	0	0	0	0	0	1,315	449	1,752	64,479	2,857	6,073	20,437	0	104,331	1,944,053	3.9%
01/07 - 12/07	2,286	0	0	0	0	0	0	0	0	6,125	1,880	12,518	33,966	0	56,565	2,000,618	2.1%
01/08 - 12/08	2,290	0	0	0	0	0	0	0	0	0	0	3,921	157,316	0	163,527	2,164,145	6.2%
01/09 - 12/09	0	0	0	0	0	0	0	0	0	0	0	0	156,886	0	156,886	2,321,031	5.9%
01/10 - 12/10	0	0	0	0	0	0	0	0	0	0	0	0	159,724	0	159,724	2,480,755	6.0%
01/11 - 12/11	0	0	0	0	0	0	0	0	0	0	0	0	123,901	1,344	125,245	2,606,000	4.7%
01/12 - 12/12	0	0	0	0	0	0	0	0	0	0	0	0	0	14,502	14,502	2,620,502	0.5%
01/13 - 12/13	0	0	0	0	0	0	0	0	0	0	0	0	0	20,693	20,693	2,641,195	0.8%
01/14 - 12/14	0	0	0	0	0	0	0	0	0	0	0	0	0	6,860	6,860	2,648,055	0.3%
Annual (\$)	94,590	167,560	324,292	145,366	25,008	592,902	145,927	112,072	71,737	243,736	4,823	22,512	654,129	43,399	2,648,055		
Cumul. (\$)	94,590	262,150	586,442	731,808	756,816	1,349,718	1,495,645	1,607,717	1,679,454	1,923,192	1,928,015	1,950,527	2,604,656	2,648,055			
Annual (%)	3.6%	6.3%	12.2%	5.5%	0.9%	22.4%	5.5%	4.2%	2.7%	9.2%	0.2%	0.9%	24.7%	1.6%			
Cumul. (%)	3.6%	9.9%	22.1%	27.6%	28.6%	51.0%	56.5%	60.7%	63.4%	72.6%	72.8%	73.7%	98.4%	100.0%			

Note: This is a dynamic document in which cashflow forecasts are subject to change with changes in scope, actual contract awards, and revised project estimates and contingencies.  
Cashflow forecasts will be updated on a regular basis and will be available from the SNWA Finance Department.

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**APPENDIX C**  
**HISTORICAL TOTAL CIP COSTS**  
(Does not include costs for candidate projects listed in Appendix A)  
(Dollars in Millions)

	Authorized Funding Amt. (Midpoint of Construction)	Current Cost Forecast (Midpoint of Construction)	Variance From Previous Forecast
<i>CIP December 4, 1995</i>	\$2,115.7	\$2,115.7	n/a
<i>CIP Amended June 20, 1996</i>	\$2,115.7	\$2,115.7	\$0.0
<i>CIP Amended January 16, 1997</i>	\$2,115.7	\$2,115.7	\$0.0
<i>CIP Amended July 17, 1997</i>	\$2,115.7	\$2,036.7	(\$79.0)
<i>CIP Amended January 15, 1998</i>	\$2,115.7	\$2,009.4	(\$27.3)
<i>CIP Amended May 21, 1998</i>	\$2,115.7	\$2,004.6	(\$4.8)
<i>CIP Amended January 21, 1999</i>	\$2,142.4 (1)	\$2,019.6	\$15.0
<i>CIP Amended August 19, 1999</i>	\$2,142.4	\$2,001.5	(\$18.1)
<i>CIP Amended January 20, 2000</i>	\$2,142.4	\$2,007.9	\$6.4
<i>CIP Amended December 11, 2000</i>	\$2,142.4	\$2,061.6	\$53.7
<i>CIP Amended November 15, 2001</i>	\$2,322.4 (2)	\$2,265.6	\$204.0
<i>CIP Amended December 19, 2002</i>	\$2,098.4 (3)	\$2,026.1	(\$239.5)
<i>CIP Amended December 18, 2003</i>	\$2,098.4	\$1,940.3	(\$85.8)
<i>CIP Amended November 18, 2004</i>	\$2,098.4	\$1,981.9	\$41.6
<i>CIP Amended May 19, 2005</i>	\$2,748.4 (4)	\$2,636.7	\$654.8
<i>CIP Amended May 18, 2006</i>	\$2,748.4	\$2,648.1	\$11.4

*Cumulative savings-to-date are estimated to be \$100.3 million. These savings remain available within the capital plan for additional projects.*

*(1) Authorized Funding Amount increased by \$26.7 million in January 1999 for Boulder City Water Delivery Improvements.*

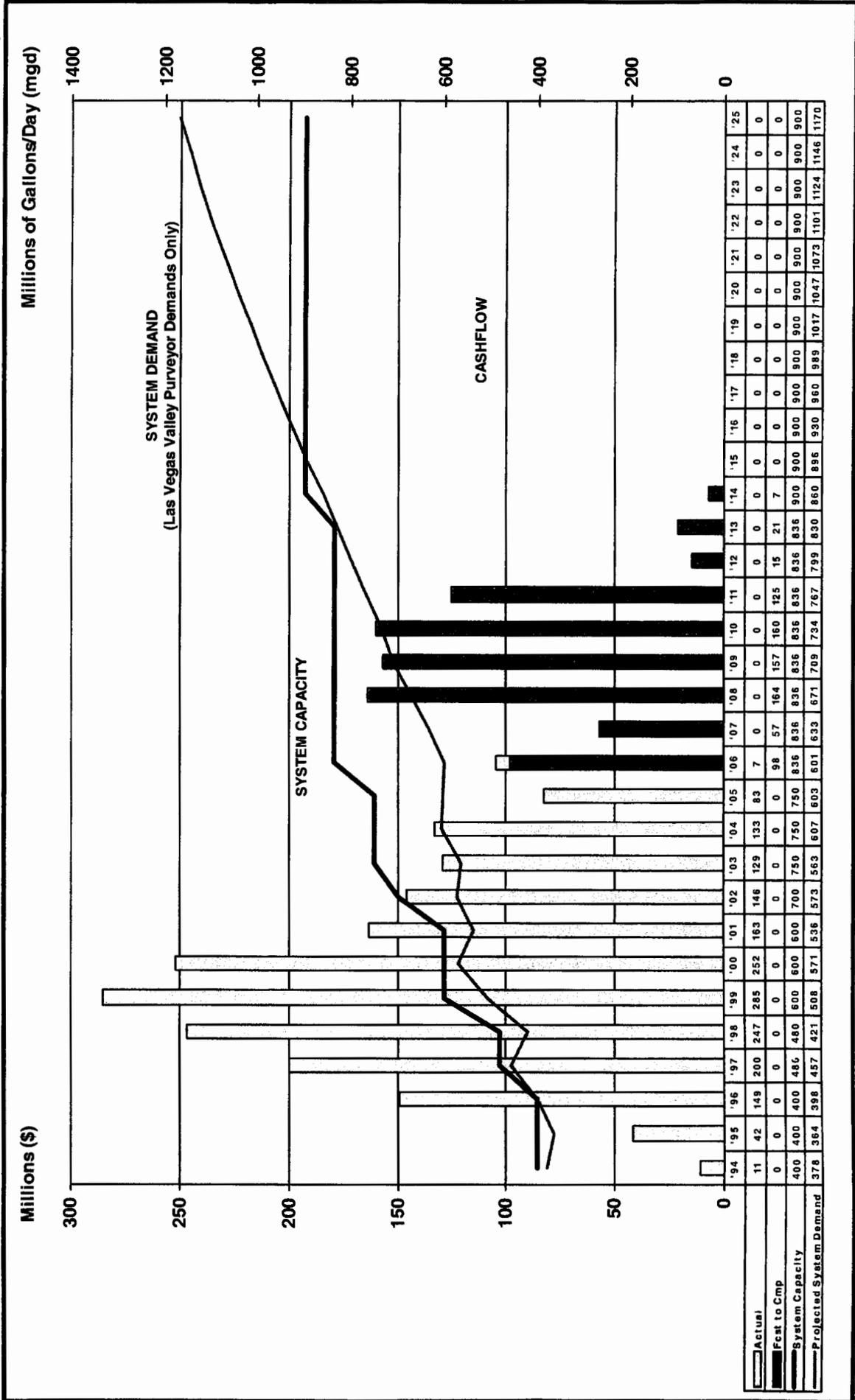
*(2) Authorized Funding Amount Increased by \$180.0 million in November 2001 for the Arizona Groundwater Banking.*

*(3) Authorized Funding Amount decreased by \$224.0 million in December 2002 for water resource acquisitions moved to Major Construction & Capital Plan.*

*(4) Authorized Funding Amount increased by \$650.0 million in May 2005 for Lake Mead Intake No. 3.*

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**Appendix D  
Cashflow  
Southern Nevada Water Authority**



Note : 1) This is a dynamic document in which cashflow forecasts are subject to change with changes in scope, actual contract awards, and revised project estimates and contingencies. Cashflow forecast will be updated on a regular basis and available from the SNWA Finance Department. 2) System Demand curve does not include Boulder City raw or treated water demands, but cashflow does include cost of Boulder City Water Delivery improvements project. System Demand curve uses actual data through year 2005.

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**APPENDIX E  
VARIANCE REPORT (CHANGES SINCE LAST CIP AMENDMENT)**

			May 2005 CIP	May 2006 CIP	Variance	May 2005 CIP	May 2006 CIP
<b>General</b>							
	Planning/EIS		\$39.5	\$39.5	\$0.0		
	SNWA Administration		\$54.9	\$55.1	\$0.2		
	<b>TOTAL</b>					\$94.4	\$94.6
<b>1997 Facilities</b>							
L11	Low Lift Pumping Station		\$1.5	\$1.5	\$0.0		
	Indirect Costs		\$0.3	\$0.3	\$0.0		
B01	Batch Plant at AMSWTF		\$1.7	\$1.7	\$0.0		
D01	Scrubber Prepurchase at AMSWTF		\$0.0	\$0.0	\$0.0		
D11	Disinfection Facilities Upgrades at AMSWTF		\$3.9	\$3.9	\$0.0		
F11	Filter Additions at AMSWTF		\$10.6	\$10.6	\$0.0		
P11	Plant Improvements at AMSWTF		\$8.8	\$8.8	\$0.0		
P12	Plant Mass Excavation at AMSWTF		\$0.6	\$0.6	\$0.0		
	Indirect Costs		\$6.6	\$6.6	\$0.0		
H01	Hacienda Pumps Prepurchase		\$0.0	\$0.0	\$0.0		
M11	Gibson Lateral (48" - 2 miles)		\$5.2	\$5.2	\$0.0		
R11	RM Tank (46 MG)		\$15.2	\$15.2	\$0.0		
R12	RM Tank Mass Excavation		\$1.8	\$1.8	\$0.0		
S11	Simmons Pumping Station (71 mgd)		\$8.6	\$8.6	\$0.0		
T01	Valves Prepurchase		\$1.0	\$1.0	\$0.0		
T11	RM Tunnel (144" - 4 miles)		\$19.7	\$19.7	\$0.0		
T12	RM Tunnel Portal Connection		\$13.1	\$13.1	\$0.0		
T13	RM Regulating Tank Mass Excavation		\$1.3	\$1.3	\$0.0		
W11A	West Valley Lateral (60" - 3.3 miles) - Section A		\$16.7	\$16.7	\$0.0		
W11B	West Valley Lateral (60" - 2.9 miles) - Section B		\$14.8	\$14.8	\$0.0		
	Indirect Costs		\$25.3	\$25.3	\$0.0		
10010C	Substation Mass Excavation		\$6.6	\$6.6	\$0.0		
C11	Communications		\$1.2	\$1.2	\$0.0		
	Operational Decision Support System		\$1.2	\$1.2	\$0.0		
	Indirect Costs		\$2.0	\$2.0	\$0.0		
	<b>TOTAL</b>					\$167.7	\$167.7
<b>1999 Facilities</b>							
08010K	East C-1 Detention Basin		\$6.8	\$6.8	\$0.0		
08010L	Chemical Containment System at AMSWTF		\$1.6	\$1.6	\$0.0		
	Indirect Costs		\$0.7	\$0.7	\$0.0		
11010A	RM Lateral (72" - 3.8 miles)		\$8.4	\$8.4	\$0.0		
11010B	SVL - Major Crossings		\$4.5	\$4.5	\$0.0		
11010C	SVL (108" - 9.8 miles)		\$20.8	\$20.8	\$0.0		
11010D	Foothills 2210 PS (140 mgd)		\$17.7	\$17.7	\$0.0		
11010E	RM 2530 PS (140 mgd)		\$21.7	\$21.7	\$0.0		
11010G	Horizon Ridge 2375 Resv (10 MG), SV Regul Resv (4 MG)		\$9.8	\$9.8	\$0.0		
11010H	SVL (90" - 5 miles, 54" - 0.2 miles)		\$12.1	\$12.1	\$0.0		
11010I	SVL - MacDonald Ranch (108" - 1.1 miles)		\$5.1	\$5.1	\$0.0		
11010K	SVL (84" - 6.8 miles)		\$17.6	\$17.6	\$0.0		
11010L	Burkholder 2210 Regulating Reservoir (25 MG)		\$13.0	\$13.0	\$0.0		
11010M	ROFCs		\$6.9	\$6.9	\$0.0		
11010P	Pipe Prepurchase (108")		\$23.5	\$23.5	\$0.0		
11010Q	Pipe Prepurchase 11010H Phase I (90")		\$1.5	\$1.5	\$0.0		
11010R	SV Regul Resv Inlet/Outlet Pipeline (90" - 0.6 miles, 54" - 0.2 miles)		\$2.2	\$2.2	\$0.0		
11010S	SVL - MacDonald Ranch Extension (108" 0.4 miles)		\$1.7	\$1.7	\$0.0		
11010W	SVL - Disinfection		\$0.5	\$0.5	\$0.0		
11010X	Black Mountain ROFC (25 mgd)		\$2.6	\$2.6	\$0.0		
11010Z	R-8 Lateral (24" - 0.8 miles)		\$1.0	\$1.0	\$0.0		
12010A	SNWS Phase II Mass Excavation		\$2.1	\$2.1	\$0.0		
12010B	SNWS Phase II System "C" (225 mgd) (27MG)		\$66.6	\$66.6	\$0.0		
	Land Acquisition (Capital Costs)		\$5.8	\$5.8	\$0.0		
	Indirect Costs		\$22.0	\$22.0	\$0.0		
10010Z	CRC Power Development (Phase I)		\$44.3	\$44.3	\$0.0		
11010J	SVL - Communications		\$2.6	\$2.6	\$0.0		
11010T	SVL - Controls		\$1.0	\$1.0	\$0.0		
	Indirect Costs		\$0.2	\$0.2	\$0.0		
	<b>TOTAL</b>					\$324.3	\$324.3
<b>2000 Facilities</b>							
08010C	Ozone Addition to AMSWTF (Pre-Design)		\$0.6	\$0.6	\$0.0		
08010D	Site Preparation for Ozone Addition to AMSWTF		\$3.6	\$3.6	\$0.0		
	Indirect Costs		\$0.3	\$0.3	\$0.0		
13010A	EVL - Hollywood/DI to Sloan PS (78" - 2.7 miles)		\$18.5	\$18.5	\$0.0		
13010B	EVL - Sloan PS to Las Vegas Blvd. (78" - 5.7 miles)		\$18.3	\$18.3	\$0.0		
13010C	EVL - Las Vegas Blvd. to Lamb PS (78" - 4.5 miles)		\$15.3	\$15.3	\$0.0		
13010D	Sloan 2160 PS (20 mgd)/Structure (175 mgd)		\$27.6	\$27.6	\$0.0		
13010E	Lamb 2350 PS (20 mgd)/Structure (175 mgd)		\$22.9	\$22.9	\$0.0		
13010F	Grand Teton 2330 Reservoir (10 MG)		\$10.6	\$10.6	\$0.0		

**APPENDIX E  
VARIANCE REPORT (CHANGES SINCE LAST CIP AMENDMENT)**

		May 2005 CIP	May 2006 CIP	Variance	May 2005 CIP	May 2006 CIP
13010I	Disinfection Facilities - Carlton Square/Twin Lakes	\$2.9	\$2.9	\$0.0		
13010W	EVL - Disinfection	\$0.3	\$0.3	\$0.0		
	Land Acquisition (Capital Costs)	\$7.2	\$7.2	\$0.0		
	Indirect Costs	\$13.4	\$13.4	\$0.0		
10010M	NPC Connections to Sloan PS and Lamb PS	\$1.3	\$1.3	\$0.0		
13010J	EVL - Communications	\$2.1	\$2.1	\$0.0		
13010T	EVL - Controls	\$0.5	\$0.5	\$0.0		
	Indirect Costs	\$0.2	\$0.2	\$0.0		
	<b>TOTAL</b>				<b>\$145.6</b>	<b>\$145.6</b>
<b>2001 Facilities</b>						
10020A	CRC Power Development Project (Phase II)	\$11.3	\$11.3	\$0.0		
10020B	CRC Power Development Project (Phase III)	\$13.7	\$13.7	\$0.0		
	<b>TOTAL</b>				<b>\$25.0</b>	<b>\$25.0</b>
<b>2002 Facilities</b>						
07010A	Lake Mead Intake No. 2 (100 mgd)	\$90.3	\$90.3	\$0.0		
07010B	Raw Water Pumping System (108" - 2.0 miles 100 mgd)	\$124.2	\$124.2	\$0.0		
07010C	RM Aqueduct (108" - 3.2 miles)	\$15.6	\$15.6	\$0.0		
07010E	BWC Pipeline Relocation	\$0.6	\$0.6	\$0.0		
	Indirect Costs	\$25.1	\$25.1	\$0.0		
08010A	RMWTF Direct Filtration ( 150 mgd); Ozone at RMWTF (150 mgd); Clearwell Exp. (25 MG/50 MG)	\$232.0	\$232.0	\$0.0		
08010H	AMSWTF Modulating Weirs	\$0.3	\$0.3	\$0.0		
08010M	Magic Way RMWTF Entrance Improvements	\$0.5	\$0.5	\$0.0		
08010N	RMWTF Temporary Fluoridation	\$1.1	\$1.1	\$0.0		
	Indirect Costs	\$24.4	\$24.4	\$0.0		
13510A	Boulder City Water Delivery Improvements (30" - 7.0 miles, 10 mgd)	\$20.9	\$20.9	\$0.0		
14010A	NVL - Washburn Rd to Decatur 2350 Res. (24" to 72" - 6.0 miles)	\$9.8	\$9.8	\$0.0		
14010B	Carlton Sq. Lateral, Cole Ave to Washburn Rd (42" - 3.9 miles )	\$8.8	\$8.8	\$0.0		
14010C	Gowan 2350 PS (24 mgd)	\$7.1	\$7.2	\$0.1		
14010D	Decatur 2350 Reservoir (20 MG)	\$10.0	\$10.0	\$0.0		
14010E	Deer Springs ROFC (80 mgd)	\$3.7	\$3.7	\$0.0		
14010G	College ROFC (25 mgd)	\$3.2	\$3.2	\$0.0		
	Land Acquisition (Capital Costs)	\$2.4	\$2.4	\$0.0		
	Indirect Costs	\$7.1	\$7.1	\$0.0		
08010J	Intake System and RMWTF Communications	\$2.4	\$2.4	\$0.0		
10510A	NPC - Leased Fiber Optic Systems - Phase I	\$0.7	\$0.7	\$0.0		
14010J	NVL - Communications	\$2.0	\$2.0	\$0.0		
14010T	NVL - Control System	\$0.5	\$0.5	\$0.0		
	Indirect Costs	\$0.2	\$0.2	\$0.0		
	<b>TOTAL</b>				<b>\$592.9</b>	<b>\$592.9</b>
<b>2003 Facilities</b>						
07010D	Low Lift PS Improvements (Phase I)	\$3.0	\$3.0	\$0.0		
07210B	Low Lift PS Improvements (Phase II)	\$2.6	\$2.6	\$0.0		
	Indirect Costs	\$0.7	\$0.7	\$0.0		
08010B	Prepurchase Oxygen/Ozone Equipment (AMSWTF & RMWTF)	\$16.3	\$16.3	\$0.0		
08010ER	Ozone Addition at AMSWTF (600 mgd)	\$81.9	\$81.6	(\$0.3)		
	Indirect Costs	\$12.7	\$12.7	\$0.0		
14010F	Foothills PS Turbine Project	\$2.4	\$2.4	\$0.0		
17010C	NVL - Grand Teton Drive PS to Beltway (60" - 2.4 miles)	\$8.1	\$8.1	\$0.0		
17010G	NVL - Beltway Crossing (60" - 0.4 miles)	\$2.5	\$2.5	\$0.0		
17010H	NVL - Decatur 2538/2430 PS to Grand Teton Drive ( 60" - 2.5 miles)	\$5.2	\$5.3	\$0.1		
	Land Acquisition (Capital Costs)	\$0.7	\$0.6	(\$0.1)		
	Indirect Costs	\$2.5	\$2.5	\$0.0		
08010T	Intake System and RMWTF Controls	\$4.1	\$4.1	\$0.0		
08010W	AMSWTF Ozone Controls	\$0.6	\$0.6	\$0.0		
10510B	NPC - Leased Fiber Optic Systems - Phase II	\$2.7	\$2.7	\$0.0		
	Indirect Costs	\$0.2	\$0.2	\$0.0		
	<b>TOTAL</b>				<b>\$146.2</b>	<b>\$145.9</b>
<b>2004 Facilities</b>						
08010V	Ozone Training and Start-up Services	\$1.1	\$1.1	\$0.0		
16010A	RM PS B (175 mgd/315 mgd total), Clearwell Expansion C (25 MG/75 MG total)	\$37.5	\$37.3	(\$0.2)		
17010B	NVL - Grand Teton 2330 Res. to Valley Drive (72" - 7.0 miles)	\$18.7	\$18.7	\$0.0		
17010D	Sloan 2160 (91 mgd/111 mgd total) and Lamb 2350 (91 mgd/111 mgd total) PS Expansion	\$13.2	\$13.1	\$0.0		
17010F	Decatur 2538/2430 PS (54 mgd-2538, 27 mgd-2430/Structure 150 mgd)	\$26.5	\$26.3	(\$0.2)		
17010K	Valley Drive Isolation Valve	\$0.5	\$0.5	\$0.0		
	Land Acquisition (Capital Costs)	\$0.2	\$0.2	\$0.0		
	Indirect Costs	\$12.6	\$12.6	\$0.0		
10010P	NPC Connection to Decatur 2538 PS	\$0.0	\$0.0	\$0.0		
10010Q	CRC RM PS Expansion Power Supply	\$1.6	\$1.6	\$0.0		

**APPENDIX E  
VARIANCE REPORT (CHANGES SINCE LAST CIP AMENDMENT)**

		May 2005 CIP	May 2006 CIP	Variance	May 2005 CIP	May 2006 CIP
17010J	EVL and NVL Communications Improvements	\$0.4	\$0.4	\$0.0		
	Indirect Costs	\$0.2	\$0.2	\$0.0		
	<b>TOTAL</b>				\$112.5	\$112.0
<b>2005 Facilities</b>						
07210A	Raw Water Pumping System Expansion (200 mgd RMWTF + 160 mgd AMSWTF/460 total)	\$64.0	\$0.0	(\$64.0)		
	Indirect Costs	\$8.5	\$0.0	(\$8.5)		
08010F	AMSWTF Process Improvements	\$54.1	\$0.0	(\$54.1)		
08210A	RMWTF Expansion (150 mgd/300 mgd total)	\$78.5	\$0.0	(\$78.5)		
08210B	RMWTF Prepurchase Ozone Equipment (150 mgd/300 mgd total)	\$6.0	\$5.5	(\$0.5)		
	Indirect Costs	\$14.5	\$0.8	(\$13.7)		
13010K	EVL Interconnections	\$6.0	\$5.4	(\$0.6)		
17010A	EVL - River Mtns. Res. to Desert Inn Rd. ( 72" - 8.2 miles)	\$42.2	\$42.1	(\$0.1)		
19010A	Horizon Ridge 2375 Reservoir Expansion (10 MG/20 MG)	\$10.5	\$10.0	(\$0.5)		
	Land Acquisition (Capital Costs)	\$0.1	\$0.1	\$0.0		
	Indirect Costs	\$7.9	\$7.8	(\$0.2)		
	<b>TOTAL</b>				\$292.3	\$71.7
<b>2006 Facilities</b>						
07210A	Raw Water Pumping System Expansion (200 mgd RMWTF + 160 mgd AMSWTF/460 total)	\$0.0	\$66.4	\$66.4		
07210C	Intake No. 2 to AMSWTF By-pass Pipeline	\$15.2	\$15.3	\$0.1		
	Indirect Costs	\$2.2	\$11.0	\$8.7		
08010F	AMSWTF Process Improvements	\$0.0	\$56.7	\$56.7		
08210A	RMWTF Expansion (150 mgd/300 mgd total)	\$0.0	\$79.7	\$79.7		
13010H	Disinfection Facilities - Horizon/Parkway/Bermuda	\$3.1	\$0.0	(\$3.1)		
	Indirect Costs	\$0.0	\$13.7	\$13.7		
15010A	RM 2530 PS Equestrian Pump Addition (7 mgd/14 mgd total)	\$0.8	\$0.9	\$0.1		
	Indirect Costs	\$0.5	\$0.1	(\$0.4)		
	<b>TOTAL</b>				\$21.8	\$243.7
<b>2007 Facilities</b>						
17010L	In-Valley Isolation Valves	\$2.1	\$4.2	\$2.1		
	Indirect Costs	\$0.2	\$0.6	\$0.4		
	<b>TOTAL</b>				\$2.3	\$4.8
<b>2008 Facilities</b>						
07011B	Raw Water Pumping System - Warranty	\$0.0	\$4.5	\$4.5		
	Indirect Costs	\$0.0	\$0.6	\$0.6		
19010B	Gilespie Turnout and ROFC Station (60 mgd)	\$9.0	\$10.0	\$1.1		
19010C	Magic ROFC (15 mgd)	\$7.0	\$5.6	(\$1.4)		
	Indirect Costs	\$2.1	\$1.8	(\$0.3)		
	<b>TOTAL</b>				\$18.1	\$22.5
<b>2011 Facilities</b>						
07010F	Lake Mead Intake No. 3	\$556.4	\$556.4	\$0.0		
	Indirect Costs	\$93.6	\$93.6	\$0.0		
13010H	Disinfection Facilities - Horizon/Parkway/Bermuda	\$0.0	\$3.5	\$3.5		
	Indirect Costs	\$0.0	\$0.6	\$0.6		
	<b>TOTAL</b>				\$650.0	\$654.1
<b>2014 Facilities</b>						
20010A	Sloan 2160 PS Expansion (64 mgd/175 mgd total)	\$12.6	\$12.6	\$0.0		
20010B	Lamb 2350 PS Expansion (64 mgd/175 mgd total)	\$7.9	\$7.9	\$0.0		
20010C	Decatur 2538 PS Expansion (24 mgd/78 mgd total)	\$7.9	\$7.9	\$0.0		
20010D	Decatur 2350 Reservoir Expansion (10 MG/30 MG total)	\$9.8	\$9.8	\$0.0		
	Indirect Costs	\$5.4	\$5.4	\$0.0		
	<b>TOTAL</b>				\$43.6	\$43.6
					\$11.4	\$2,636.7
					\$2,648.1	

Notes:

1. Dollars are in millions and rounded to the nearest \$100,000.