# Table 1

## FY 1988 through FY 2004

**Table 1**
**Historical Summary of Boulder Canyon Project Replacements**
**For The Period June 1, 1987 Through September 30, 2013.**
**Plus**
**Summary of Budgetad Boulder Canyon Project Replacements**
**For The Period October 1, 2013 Through September 30, 2023.**

| ITEM NO. | DESCRIPTION | AMORT. CLASS | FY 1988 | FY 1989 | FY 1990 | FY 1991 | FY 1992 | FY 1993 | FY 1994 | FY 1995 | FY 1996 | FY 1997 | FY 1998 | FY 1999 | FY 2000 | FY 2001 | FY 2002 | FY 2003 | FY 2004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| 1 | Hoover-Mead Consolidation | Multi-Yr | | 758,109 | 3,433,253 | 482,973 | 1,361,537 | 2,018,337 | 2,952,402 | 499,202 | 57,274 | | | | | | | | |
| 2 | River Telemetry Upgrade/Sutron | Annual | | | 313,083 | 255,317 | 52,412 | 217,591 | 142,989 | 39,189 | 31,340 | 18,037 | | | | | | | |
| 3 | P/P Piping Replacement | Annual | | | | | 40,623 | 249,923 | 214,208 | 212,840 | 158,184 | 81,755 | 134,248 | 8,862 | | 150,000 | | | |
| 4 | Jet Flow Gates-Install/Design | Multi-Yr | | | | | 109,273 | 71,399 | 24,301 | 934,294 | 203,274 | 581,007 | 1,801,733 | 23,946 | | | | | |
| 5 | Station/Domestic Water Systems | Multi-Yr | | 35,770 | 1,916 | 113,998 | 127,573 | 1,034,419 | 432,474 | 104,900 | | | | | | | | | |
| 6 | Cooling Water Eductor System | Annual | | | | | 46,301 | 58,594 | 696,195 | 16,932 | 241,717 | 368,181 | 274,444 | 258,798 | 250,416 | 251,321 | 292,064 | 254,488 | 63,529 |
| 7 | Crane Modernization | Multi-Yr | | | | | | 92,519 | 287,216 | 157,774 | 4,623 | 23,629 | 1,789 | | 1,005 | | | | |
| 8 | Thrust Bearing Cooler NV/AZ | Annual | | | | | | 3,071 | 105,545 | 2,213 | 36,976 | 239,359 | | | | | | | |
| 9 | Unscheduled Powerplant Replacements | Annual | | | 331,455 | (228,839) | 96,178 | 180,705 | 847,127 | 556,462 | 621,686 | 5,637 | 22,316 | 14,375 | | | | | |
| 10 | Station Service Units-Recondition | Multi-Yr | | | 29,594 | 5,491 | 179 | 71,389 | 851,321 | 1,215,620 | 360,235 | | | | | | | | |
| 11 | Station Service Air Compressors | Multi-Ann | 268,046 | 61,570 | 14,746 | | | | | | 3,800 | | | | | | | | |
| 12 | Jus System Upgrade | Multi-Yr | | | | | | | | 173,817 | 550,971 | 469,855 | | | | | | | |
| 13 | Fire Alarm System | Multi-Yr | | | | | | | 26,495 | 15,756 | 75,280 | 484,118 | 16,401 | | | | | | |
| 14 | Intake Emergency Generators | Multi-Yr | | | | | | | | 329,182 | 58,354 | 345,696 | 84,047 | 13,293 | | | | | |
| 15 | Sewage Sludge Pumps | Multi-Yr | | | | | | | | | 80,300 | 25,533 | | | | | | | |
| 16 | Scheduled Communication Replacements | Annual | | | | | | | | | 288,676 | 270,328 | 289,404 | 189,939 | 214,039 | 45,629 | 184,070 | 53,774 | |
| 17 | Wicketgate Bushings/Wear Plate | Annual | | | | | | | | | | | | 6,786 | 234,354 | 57,274 | 78,654 | 155,526 | 511,159 |
| 18 | Ground Switch - N4 | Annual | | | | | | | | | 4,369 | | | | | | | | |
| 19 | Scheduled Control System Replacements | Annual | | | | | | | | | 324,242 | 437,984 | 527,495 | 252,011 | 91,535 | 287,854 | 392,305 | 128,085 | 170,770 |
| 20 | Upgrade Machine Shop Equipment | Multi-Yr | | | | | | | | 571 | 412,312 | 389,403 | | | | | | | |
| 21 | Central Section Replacements | Multi-Yr | | | | | | | | | | | 102,710 | 922,843 | 122,739 | | | | |
| 22 | Sewage Plant | Annual | | | | | | | | | | 269,966 | | | | | | | |
| 23 | Life Safety Code/ADA Compliance | Annual | | | | | | | | | | 44,679 | 111,716 | 464,688 | 90,564 | 653,405 | 260,732 | 125,143 | 134,089 |
| 24 | Station Service Electrical | Multi-Yr | | | | | | 42,135 | 249 | 867 | | | | | | | | | |
| 25 | Spare Unit Breaker | Multi-Yr | | | | | | | | | | | 14,226 | 14,725 | 236,557 | 12,744 | 2,644 | | |
| 26 | Intake Gatehoist Starters | Annual | | | | | | | | | | | 8,887 | 27,952 | | | | | |
| 27 | Battery - Operated Forklifts | Annual | | | | | | | | | | | 22,041 | | | | | | |
| 28 | Seal Rings - A3/A4 | Annual | | | | | | | | | | | 16,398 | 177,535 | | | | | |
| 29 | Lighting Panels | Multi-Yr | | | | | | | 2,221 | 5,404 | | | | | | | | | |
| 31 | River Telemetry/Mill | Annual | | 628 | 19,037 | 50,133 | 25,394 | 2,025 | 103,488 | 20,785 | | | | | | | | | |
| 32 | Paradox Gate Controls | Multi-Yr | | | | | | | 4,987 | 48,619 | | | | | | | | | |
| 33 | Butterfly Seats/Pivot Bearings | Annual | | | | | | | | 9,737 | | | | | | | | | |
| 34 | Station Service Equipment | Multi-Yr | 168,891 | 38,062 | | | | | | | | | | | | | | | |
| 35 | General Piping Replacements | Annual | 18,649 | | | | | | | | | | | | | | | | |
| 36 | 2300V Station Service Cable | Annual | 168,693 | | | | | | | | | | | | | | | | |
| 37 | Needle Valve Replacement Program | Multi-Yr | 31,789 | 47,197 | 379,212 | 1,936,298 | 454,350 | 4,034 | | | | | | | | | | | |
| 38 | 480V Motor Control Centers | Multi-Yr | 190,250 | 5,149 | | | | | | | | | | | | | | | |
| 39 | Central Section Firelines | Multi-Yr | 276,879 | 45,965 | | | | | | | | | | | | | | | |
| 40 | Dam/Powerplant Elevator Controls/Elevator/Motor&Controller Repic | Multi-Yr-Ann | 513,879 | 77,665 | | | | | | | | | | | | | | | |
| 41 | AZ/NV Valvehouse Elevators | Multi-Yr | 247,645 | 338,495 | 96,290 | | | | | | | | | | | | | | |
| 42 | Flowmeter Record/Monitor Equipment | Multi-Yr | 145,763 | 283 | | | | | | | | | | | | | | | |
| 43 | Pre-88 Expense Water Piping (SCE) | Annual | 403,501 | | | | | | | | | | | | | | | | |
| 44 | Pre-88 Expense A8 Windings (SCE) | Annual | 98,835 | | | | | | | | | | | | | | | | |
| 45 | Temperature Monitoring Equipment | Multi-Yr | 353,769 | 105,562 | | | | | | | | | | | | | | | |
| 46 | Auto Grease System | Multi-Yr | 47,695 | 11,665 | | | | | | | | | | | | | | | |
| 47 | AZ Valve House Water Supply | Multi-Yr | 212,470 | 53,404 | | | | | | | | | | | | | | | |
| 48 | Central Section Sump Pumps | Multi-Yr | 240,952 | 28,479 | | | | | | | | | | | | | | | |
| 49 | 125-250V DC Battery Charge System | Annual | 371,186 | | | | | | | | | | | | | | | | |
| 50 | Fiber Optics Communications | Multi-Yr | 98,136 | 226,454 | 89,557 | | | | | | | | | | | | | | |
| 51 | Central Section Ventilation | Ann-Multi | 973 | | 1,542 | | 59,188 | 1,285,442 | 79,483 | | | | | | | | | | |
| 52 | Station Service Governors | Ann-Multi | | 25,040 | | 2,207 | 407,788 | | | | | | | | | | | | |
| 53 | Unit CB's/N1-N7, A1-A2, 1B, SS | Multi-Yr | 10,997 | 50,761 | | | | | | | | | | | | | | | |
| 54 | M Distribution Board | Multi-Yr | | | 419 | 942,180 | 687,861 | | | | | | | | | | | | |
| 55 | 150-Ton Cableway Control Boards/Relays | Ann-Multi | | 65,048 | | 69,041 | 667,923 | 110,590 | 305 | | | | | | | | | | |
| 56 | Penstock Tunnels-Lighting System | Multi-Ann | | | 36 | 63,096 | 172,089 | 17,086 | 55 | | | | 3,706 | 16,327 | 182,620 | 4,293 | 1,880 | 58,353 | 629,393 |
| 57 | Communications Upgrade | Multi-Yr | | | | | 985,207 | 85,088 | | | | | | | | | | | |
| 58 | Vacuum Purification Units | Multi-Yr | | | | | 2,147 | 8,858 | | | | | | | | | | | |
| 59 | Uninterruptible Power Supply | Annual | | | | | 218,394 | | | | | | | | | | | | |
| 60 | 4th Floor Unit Controls/NV | Multi-Yr | | | | | 71,592 | 115,321 | | | | | | | | | | | |
| 61 | 4th Floor Unit Controls/AZ | Multi-Yr | | | | | 130,920 | 105,203 | | | | | | | | | | | |
| 62 | Telephone Switch | Multi-Yr | | | | | | 317,984 | 35,609 | | | | | | | | | | |
| 63 | Station Service Controls/Relays | Multi-Yr | | | | | | 223,442 | 601 | | | | | | | | | | |
| 64 | Station Service Compressors | Multi-Yr | | | | | | | 30,664 | 775,767 | | | | | | | | | |
| 65 | Dewater Eductors/Water Pumps | Annual | | | | | | | 4,970 | | | | | | | | | | |
| 66 | Miscellaneous/Minor Equipment | Annual | 142,516 | 203,260 | | 15,031 | 32,668 | 33,703 | 127,056 | | 129,370 | 109,324 | 104,818 | 106,463 | 89,300 | 77,810 | 78,661 | 110,985 | 27,018 |
| 67 | Sedans/Transportation Equipment (Rolling Stock) | Annual | 72,919 | 195,972 | | 60,000 | 91,288 | 108,403 | 105,800 | 58,996 | 46,691 | 54,389 | (17,760) | | | 68,835 | 23,050 | 153,580 | 67,409 |
| 68 | Unscheduled General Project Replacements | Annual | | | | | | | 2,428 | | | 3,205 | 98,265 | 7,785 | 4,952 | | | | |
| 69 | Communications Test Equipment | Annual | | | | | | | 104,958 | 86,838 | 11,359 | 18,251 | 27,364 | 5,785 | 12,331 | 14,322 | | 252 | 513 |
| 70 | Controls System Test Equipment | Annual | | | | | | | 6,158 | 8,747 | 19,940 | 31,825 | 25,811 | 549 | 2,323 | | 7,058 | | 25,000 |
| 72 | BC Water System Modifications | Annual | 138,220 | 4,404 | | | | | | | | | | | | | | | |
| 73 | Breakers/Timing Tester | Annual | | | | 30,000 | | | | | | | | | | | | | |
| 74 | Machine Shop Mill | Multi-Yr | | | | | 43,676 | 722 | | | | | | | | | | | |
| 75 | Roof Drainage System | Annual | 43,155 | | | | | | | | | | | | | | | | |
| 76 | Other Noncontract Replacement Expense | Annual | 202,568 | | | | | | | | | | | | | | | | |
| 77 | Transformer Warranty Work | Multi-Yr | | | | | | | | | | 331,953 | 100,000 | | | | | | |
| 78 | Generator Coolers | Annual | | | | | | | | | | | 78,759 | 182,349 | 86,412 | 19,502 | 140,307 | 133,334 | 22,526 |
| 79 | Misc NC Expense Paint Shop | Annual | 14,846 | | | | | | | | | | | | | | | | |
| 80 | Air Compressor | Annual | 2,760 | | | | | | | | | | | | | | | | |
| 81 | Power Saw | Annual | 13,642 | | | | | | | | | | | | | | | | |
| 82 | Lathe | Annual | 80,997 | | | | | | | | | | | | | | | | |
| 83 | Fork Lift | Annual | 44,115 | | | | | | | | | | | | | | | | |
| 84 | A8 Seal Rings | Annual | | | | | | | | | | | 10,200 | | | | | | |
| 85 | Auto Synchronizer | Annual | | | | | | | | | | | 8,083 | | | | | | |
| 86 | Buttarfy (Rubber) Values (Seats and Seals (Reseating) | Annual | | | | | | | | | | | | | 21,384 | 642,517 | 774,663 | 832,814 | 638,372 |
| 87 | DSWR Warehouse (Western) ** | Annual | | | | | | | | | | | | 183 | 4,778 | 38,541 | 4,932 | 20,378 | |
| 88 | Remove & Dispose of Bushings at Hoover 69kV Yard ** | Annual | | | | | | | | | | | | | | | | | |
| 89 | Air Compressors Overhaul | Annual | | | | | | | | | | | | 47,854 | | | | | |
| 90 | Batteries - UPS | Annual | | | | | | | | | | | | 81,161 | | | | | |
| 91 | Emergency Compressor Repair | Annual | | | | | | | | | | | | 30,468 | | | | | |
| 92 | Vibration Test/Correct A5/N7 | Annual | | | | | | | | | | | | 165,038 | 26,468 | | | | |
| 93 | Replace Station Service Tie Brkr w/Bus | Annual | | | | | | | | | | | | | | 8,457 | | | |
| 94 | Service Air System Replacement | Annual | | | | | | | | | | | | | | 5,029 | | | |
| 95 | Spare Turbine Seal Rings | Annual | | | | | | | | | | | | | | 10,398 | 182,541 | 2,799 | 140,825 |
| 96 | VHF Radios (Western) ** | Annual | | | | | | | | | | | | (338) | | 10,269 | 61,343 | 88,634 | (30,154) |
| 97 | Relay Replacements on Hoover-Mead Lines/Digital Vault/Recorders ** | Annual | | | | | | | | | | | | | | | | | |
| 98 | 2300V Conduit & Power Cable (Warehouse) Repic | Annual | | | | | | | | | | | | | | | | | |
| 99 | Replace Wastewater Treatment Facility | Annual | | | | | | | | | | | | | | | | | |
| 100 | Drum Gate Hinge Pins Replacements | Annual | | | | | | | | | | | | | | | | | |
| 101 | Squibs on 17 Generator CO2 Sys | Annual | | | | | | | | | | | | | | | | | |
| 102 | Station Service 250V Batteries | Annual | | | | | | | | | | | | | | 71,200 | 37,379 | (2,026) | |
| 103 | Incline Tunnel Piping | Annual | | | | | | | | | | | | | | 38,505 | 215,415 | 346 | |
| 104 | Life Safety (Emergency Lighting) | Annual | | | | | | | | | | | | | | 31,154 | 33,860 | 275,710 | |
| 105 | Relay Protection | Annual | | | | | | | | | | | | | | 73,252 | | | |
| 106 | Servo Motor (N7) | Annual | | | | | | | | | | | | | | 6,708 | | | |
| 107 | SF6 Breaker Mods | Annual | | | | | | | | | | | | | | | 135,444 | | |
| 108 | Slot Line Piping Repair | Annual | | | | | | | | | | | | | | | 47,085 | 267,416 | |
| 109 | Replace/Upgrade Microwave Telemetry System | Annual | | | | | | | | | | | | | | | | | |
| 110 | Phasor Measurement Unit (PMU) Installaton at Mead Substation ** | Annual | | | | | | | | | | | | | | | | | |
| 111 | Drum Gate Control Valve Replacement | Annual | | | | | | | | | | | | | | | | | |
| 112 | Drum Gate Drain Hose Replacements | Annual | | | | | | | | | | | | | | | | | |
| 113 | Sump Pump - Lower Nevada | Annual | | | | | | | | | | | | | | | | | |
| 114 | Butterfly Valves Pumps/Bearings Assessment | Annual | | | | | | | | | | | | | | | | | |
| 115 | Drum Gate Seal Replacement | Annual | | | | | | | | | | | | | | | | | |
| 116 | HVAC (8th Floor) | Annual | | | | | | | | | | | | | | | | | |
| 117 | Lower Portal Tunel Lighting refurbishment | Annual | | | | | | | | | | | | | | | | | |
| 118 | Surge Arrestors | Annual | | | | | | | | | | | | | | | | 17,150 | |
| 119 | Wickgate Replacements (Stainless) | Annual | | | | | | | | | | | | | | | | | |
| 120 | Station Service Transformers | Annual | | | | | | | | | | | | | | | | | 520,035 |
| 121 | Potable Water/Fire Protection System Upgrade | Annual | | | | | | | | | | | | | | | | | |
| 122 | Hoover SCADA Upgrade and Plant/Unit Control Modernization | Annual | | | | | | | | | | | | | | | | | |
| 123 | Station Service Pelton Turbine Replacement | Annual | | | | | | | | | | | | | | | | | |
| 124 | Electrical Panel replacment | Annual | | | | | | | | | | | | | | | | | |
| 125 | Replace 2300 Volt Switchgear | Annual | | | | | | | | | | | | | | | | | |
| 126 | Western Outyear Projects to be defined later ** | Annual | | | | | | | | | | | | | | | | | |
| 127 | Low Head Turbine Runner | Annual | | | | | | | | | | | | | | | | | |
| 128 | Basler (BE1-50BF) Relay Repayments at Mead Substation ** | Annual | | | | | | | | | | | | | | | | | |
| 129 | Redundant Hoover Dynamic Signal ** | Annual | | | | | | | | | | | | | | | | | |
| 130 | JEMII Meter Replacements ** | Annual | | | | | | | | | | | | | | | | | |
| 131 | Deltec UPS Equipment | Annual | | | | | | | | | | | | | | | | | |
| **Total Replacements Cost Repayable to the U.S. Treasury** | | | **4,724,736** | **2,376,942** | **4,710,140** | **3,796,906** | **5,884,561** | **6,458,083** | **7,189,285** | **5,274,512** | **3,720,973** | **4,704,124** | **3,867,101** | **3,019,357** | **1,671,787** | **2,589,019** | **2,953,887** | **2,676,743** | **2,920,484** |
| Total Replacements Cost Reported in PRS | | | 4,724,736* | 2,376,942 | 5,143,434 | 3,591,038 | 7,538,153 | 6,693,055 | 7,861,229 | 3,709,606 | 3,720,973 | 4,704,124 | 3,867,101 | 3,019,716* | 1,667,009** | 2,377,465* | 2,886,712* | 2,580,475* | 2,937,415* |
| Prior Year Adj. of Replacements Cost Reported in PRS | | | | | (433,294) | 205,868 | (1,651,592) | (234,972) | (671,944) | 1,564,906 | | | | | | | | | |
| Total Replacements Cost Reported in PRS including PY Adjustment | | | 4,724,736* | 2,376,942 | 4,710,140 | 3,796,906 | 5,884,561 | 6,458,083 | 7,189,285 | 5,274,512 | 3,720,973 | 4,704,124 | 3,867,101 | 3,019,716 | 1,667,009 | 2,377,465 | 2,886,712 | 2,580,475 | 2,937,415 |

# Table 1

## FY 2005 through FY 2023

**TABLE 1**
**Historical Summary of Boulder Canyon Project Replacements**
**For The Period June 1, 1987 Through September 30, 2013**
**Plus**
**Summary of Budgeted Boulder Canyon Project Replacements**
**For The Period October 1, 2014 Through September 30, 2023**

| ITEM NO. | DESCRIPTION | AMORT. CLASS | FY 2005 $ | FY 2006 $ | FY 2007 $ | FY 2008 $ | FY 2009 $ | FY 2010 $ | FY 2011 $ | FY 2012 $ | FY 2013 $ | FY 2014 $ | FY 2015 $ | FY 2016 $ | FY 2017 $ | FY 2018 $ | FY 2019 $ | FY 2020 $ | FY 2021 $ | FY 2022 $ | FY 2023 $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Hoover-Mead Consolidation | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 2 | River Telemetry Upgr/Sutron | Annual | | | | | | | | | | | | | | | | | | | |
| 3 | P/P Piping Replacement | Annual | | | | | | | | | | | | | | | | | | | |
| 4 | Jet Flow Gates-Install/Design | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 5 | Station/Domestic Water Systems | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 6 | Cooling Water Eductor System | Annual | 358,445 | 312,860 | 44 | 3,135 | 41 | 530 | | | | | | | | | | | | | |
| 7 | Crane Modernization | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 8 | Thrust Bearing Cooler NV/AZ | Annual | | | | | | | | | | | | | | | | | | | |
| 9 | Unscheduled Powerplant Replacements | Annual | | | | | | | | | | | | | | | | | | | |
| 10 | Station Service Units-Reconditon | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 11 | Station Service Air Compressors | Multi-Ann | | | | | | | | | | | | | | | | | | | |
| 12 | Jus System Upgrade | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 13 | Fire Alarm System | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 14 | Intake Emergency Generators | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 15 | Sewage Sludge Pumps | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 16 | Scheduled Communication Replacements | Annual | 28,031 | 29,375 | | | | | | | | | | | | | | | | | |
| 17 | Wicketgate Bushings/Wear Plate | Annual | 148,340 | 123,018 | 635,873 | 343,221 | 182,040 | 547,517 | 209,173 | 218,032 | 359,177 | | | | | | | | | | |
| 18 | Ground Switch - N4 | Annual | | | | | | | | | | | | | | | | | | | |
| 19 | Scheduled Control System Replacements | Annual | 192,379 | 167,817 | 13,650 | 40 | | | | | | | | | | | | | | | |
| 20 | Upgrade Machine Shop Equipment | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 21 | Central Section Replacements | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 22 | Sewage Plant | Annual | | | | | | | | | | | | | | | | | | | |
| 23 | Life Safety Code/ADA Compliance | Annual | 65,948 | 76,315 | | | | | | | | | | | | | | | | | |
| 24 | Station Service Electrical | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 25 | Spare Unit Breaker | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 26 | Intake Gatehoist Starters | Annual | | | | | | | | | | | | | | | | | | | |
| 27 | Battery - Operated Forklifts | Annual | | | | | | | | | | | | | | | | | | | |
| 28 | Seal Rings - A3/A4 | Annual | | | | | | | | | | | | | | | | | | | |
| 29 | Lighting Panels | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 31 | River Telemetry/MMI | Annual | | | | | | | | | | | | | | | | | | | |
| 32 | Paradox Gate Controls | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 33 | Butterfly Seals/Pivot Bearings | Annual | | | | | | | | | | | | | | | | | | | |
| 34 | Station Service Equipment | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 35 | General Piping Replacements | Annual | | | | | | | | | | | | | | | | | | | |
| 36 | 2300V Station Service Cable | Annual | | | | | | | | | | | | | | | | | | | |
| 37 | Needle Valve Replacement Program | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 38 | 480V Motor Control Centers | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 39 | Central Section Firelines | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 40 | Dam/Powerplant Elevator Controls/Elevator/Motor&Controller Replc | MultiYr-Ann | | | | | | | | | | | | | | | | | | | |
| 41 | AZ/NV Valvehouse Elevators | Multi-Yr | | | | | | | | | 55,433 | 1,060,000 | 740,000 | 1,150,000 | | 820,000 | 1,270,000 | | 580,000 | 920,000 | |
| 42 | Flowmeter Record/Monitor Equipment | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 43 | Pre-88 Expense Water Piping (SCE) | Annual | | | | | | | | | | | | | | | | | | | |
| 44 | Pre-88 Expense A6 Windings (SCE) | Annual | | | | | | | | | | | | | | | | | | | |
| 45 | Temperature Monitoring Equipment | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 46 | Auto Grease System | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 47 | AZ Valve House Water Supply | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 48 | Central Section Sump Pumps | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 49 | 125-250V DC Battery Charge System | Annual | | | | | | | | | | | | | | | | | | | |
| 50 | Fiber Optics Communications | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 51 | Central Section Ventilation | Ann-Multi | | | | | | | | | | | | | | | | | | | |
| 52 | Station Service Governors | Ann-Multi | | | | | | | | | | | | | | | | | | | |
| 53 | Unit CB's/N1-N7, A1-A2, 1B, SS | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 54 | M Distribution Board | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 55 | 150-Ton Cableway Control Boards/Relays | Ann-Multi | | | | | | | | | | | | | | | | | | | |
| 56 | Penstock Tunnels-Lighting System | MultiYr-Ann | 1,039,290 | 417,830 | | | 141 | 110 | 114 | | | | | | | | | | | | |
| 57 | Communications Upgrade | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 58 | Vacuum Purification Units | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 59 | Uninterruptible Power Supply | Annual | | | | | | | | | | | | | | | | | | | |
| 60 | 4th Floor Unit Controls/NV | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 61 | 4th Floor Unit Controls/AZ | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 62 | Telephone Switch | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 63 | Station Service Controls/Relays | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 64 | Station Service Compressors | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 65 | Dewater Eductors/Water Pumps | Annual | | | | | | | | | | | | | | | | | | | |
| 66 | Miscellaneous/Minor Equipment | Annual | 35 | 3,082 | 23 | | | | | | | | | | | | | | | | |
| 67 | Sedans/Transportation Equipment (Rolling Stock) | Annual | 22,004 | | | | | | | | | | | | | | | | | | |
| 68 | Unscheduled General Project Replacements | Annual | | 93,104 | 6,092 | | | | | | | | | | | | | | | | |
| 69 | Communications Test Equipment | Annual | | | | | | | | | | | | | | | | | | | |
| 70 | Controls System Test Equipment | Annual | | | | | | | | | | | | | | | | | | | |
| 72 | BC Water System Modifications | Annual | | | | | | | | | | | | | | | | | | | |
| 73 | Breakers/Timing Tester | Annual | | | | | | | | | | | | | | | | | | | |
| 74 | Machine Shop Mill | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 75 | Roof Drainage System | Annual | | | | | | | | | | | | | | | | | | | |
| 76 | Other Noncontract Replacement Expense | Annual | | | | | | | | | | | | | | | | | | | |
| 77 | Transformer Warranty Work | Multi-Yr | | | | | | | | | | | | | | | | | | | |
| 78 | Generator Coolers | Annual | 20,608 | 133,220 | 9,151 | 211,753 | 30,958 | 114,227 | 258,514 | 244,545 | 112,932 | 396,000 | 416,000 | 437,000 | 459,000 | 481,000 | 504,000 | 528,000 | 554,000 | 581,000 | 610,000 |
| 79 | Misc NC Expense Paint Shop | Annual | | | | | | | | | | | | | | | | | | | |
| 80 | Air Compressor | Annual | | | | | | | | | | | | | | | | | | | |
| 81 | Power Saw | Annual | | | | | | | | | | | | | | | | | | | |
| 82 | Lathe | Annual | | | | | | | | | | | | | | | | | | | |
| 83 | Fork Lift | Annual | | | | | | | | | | | | | | | | | | | |
| 84 | A9 Seal Rings | Annual | | | | | | | | | | | | | | | | | | | |
| 85 | Auto Synchronizer | Annual | | | | | | | | | | | | | | | | | | | |
| 86 | Butterfly (Rubber) Valves (Seats and Seals (Resealing) | Annual | 621,028 | 41,312 | | 127,158 | 232,360 | 211,151 | 67,522 | | | | | | | | | | | | |
| 87 | DSWR Warehouse (Western) ** | Annual | | | | | | | | | | | | | | | | | | | |
| 88 | Remove & Dispose of Bushings at Hoover 69kV Yard ** | Annual | | | 136,587 | | | | | | | | | | | | | | | | |
| 89 | Air Compressors Overhaul | Annual | | | | 8,054 | 369,311 | 223,224 | 207,201 | 388 | 10,205 | | | | | | | | | | |
| 90 | Batteries - UPS | Annual | | | | | | | | | | | | | | | | | | | |
| 91 | Emergency Compressor Repair | Annual | | | | | | | | | | | | | | | | | | | |
| 92 | Vibration Test/Correct A5/N7 | Annual | | | | | | | | | | | | | | | | | | | |
| 93 | Replace Station Service Tie Brkr w/Bus | Annual | | | | | | | | | | | | | | | | | | | |
| 94 | Service Air System Replacement | Annual | | | | | | | | | | | | | | | | | | | |
| 95 | Spare Turbine Seal Rings | Annual | 41,052 | 4,067 | 284,189 | 341,254 | 28,293 | 170,287 | 160,355 | 121,178 | 251,946 | | | | | | | | | | |
| 96 | VHF Radios (Western) ** | Annual | 155 | (46) | | | | | | | | | | | | | | | | | |
| 97 | Relay Replacements on Hoover-Mead Lines/Digital Vault/Recorders ** | Annual | 50,381 | 135,752 | 257,835 | 272,460 | 157,203 | 225,723 | 283,148 | 141,504 | | | | | | | | | | | |
| 98 | 2300V Conduit & Power Cable (Warehouse) Replc | Annual | | | | | | | | 0 | | | | | | | | | | | |
| 99 | Replace Wastewater Treatment Facility | Annual | | | | | | | | 0 | | | | 170,000 | 2,900,000 | | | | | | |
| 100 | Drum Gate Hinge Pins Replacements | Annual | | | | | | | | | | | | | | | | | | | |
| 101 | Squibs on 17 Generator CO2 Sys | Annual | | | | | | 195,007 | 55,447 | 327,022 | | | | | | | | | | | |
| 102 | Station Service 250V Batteries | Annual | | | | | | | | | | | | | | | | | | | |
| 103 | Incline Tunnel Piping | Annual | | | | | | | | | | | | | | | | | | | |
| 104 | Life Safety (Emergency Lighting) | Annual | | | | | | 548 | | | | | | | | | | | | | |
| 105 | Relay Protection | Annual | | | | | | | | | | | | | | | | | | | |
| 106 | Servo Motor (N7) | Annual | | | | | | | | | | | | | | | | | | | |
| 107 | SF6 Breaker Mods | Annual | | | | | | | | | | | | | | | | | | | |
| 108 | Slot Line Piping Repair | Annual | | | | | | | | | | | | | | | | | | | |
| 109 | Replace/Upgrade Microwave Telemetry System | Annual | | | | 635,587 | (26,000) | 131,825 | 524,475 | 37,060 | -27,638 | | | | | | | | | | |
| 110 | Phasor Measurement Unit (PMU) Installation at Mead Substation ** | Annual | | | | 76,420 | | | | | | | | | | | | | | | |
| 111 | Drum Gate Control Valve Replacement | Annual | | | | | | | | | | | | | | | 115,000 | 620,000 | | | |
| 112 | Drum Gate Drain Hose Replacements | Annual | | | | | | | | 2,270 | 4,205 | | | | | | | | | | |
| 113 | Sump Pump - Lower Nevada | Annual | 542,339 | 770,322 | 124 | | 1,283 | | | | | | | | | | | | | | |
| 114 | Butterfly Valves Pumps/Bearings Assessment | Annual | | | | 17,350 | | | | 200,400 | | | 220,000 | | | | | | | | |
| 115 | Drum Gate Seal Replacement | Annual | | | | | | | 23,148 | | 13,612 | | | | | | | | | | |
| 116 | HVAC (8th Floor) | Annual | | | | 6,454 | 100,921 | 1,515 | 79 | | | | | | | | | | | | |
| 117 | Lower Portal Tunel Lighting refurbishment | Annual | | | | 101,976 | | | | 327 | | | | | | | | | | | |
| 118 | Surge Arrestors | Annual | | | | | | | | | | | | | | | | | | | |
| 119 | Wickgate Replacements (Stainless) | Annual | 1,387,852 | 872,390 | 2,328,789 | 956,378 | 1,539,468 | 262,191 | 1,188,287 | 326,176 | 18,809 | 200,000 | 501,000 | | | | | | | | |
| 120 | Station Service Transformers | Annual | | | | | | | | | | | | | | | | | | | |
| 121 | Potable Water/Fire Protection System Upgrade | Annual | | 138,192 | 139,937 | | | | | | | | | | | | | | | | |
| 122 | Hoover SCADA Upgrade and Plant/Unit Control Modernization | Annual | | 138,504 | 2,188,348 | 4,054,738 | 2,838,507 | 1,965,778 | 258,022 | 5,453 | 437 | | | | | | | | | | |
| 123 | Station Service Pelton Turbine Replacement | Annual | | | | | | | 9,292 | 48,487 | 670,115 | 120,000 | | | | | | | | | |
| 124 | Electrical Panel replacement | Annual | | | | | | | | 0 | 48,133 | 416,000 | | | | | | | | | |
| 125 | Replace 2300 Volt Switchgear (Changed to 480 Volt) | Multi-Year | | | | | | | | 0 | | 200,000 | 2,300,000 | 2,300,000 | | | | | | | |
| 126 | Western Outyear Projects to be defined later ** | Annual | | | | | | | | | | | | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 |
| 127 | Low Head Turbine Repair | Annual | | | | 10,838 | 18,566 | | 1,624,123 | | | | | | | | | | | | |
| 128 | Basler (BE1-50BF) Relay Repayments at Mead Substation ** | Annual | | | | 29,537 | | 9,515 | 17,262 | 122,472 | 17,654 | | | | | | | | | | |
| 129 | Redundant Hoover Dynamic Signal * | Annual | | | | | | | 36,665 | | | | | | | | | | | | |
| 130 | JEMII Meter Replacements ** | Annual | | | | | | 39,100 | 61 | | | | | | | | | | | | |
| 131 | Deltec UPS Equipment | Annual | | | | | | | | 16,023 | 343,076 | | | | | | | | | | |
| 132 | RTU at Hoover - Western ** | Annual | | | | | | | | | 16,834 | | | | | | | | | | |
| 133 | Wide-Head Range Turbine CFD and Model Study | Annual | | | | | | 1,501,571 | | 1,886,592 | 1,842,487 | 3,400,000 | 2,700,000 | 1,000,000 | | | | | | | |
| 134 | Hoover Unit 16.5 KV Generator Breaker | Annual | | | | | 170,008 | 65,859 | 6,249 | (755) | 13,857 | 110,000 | 2,600,000 | 3,600,000 | 3,800,000 | 5,250,000 | 1,350,000 | | | | |
| 135 | Microwave Radio | Annual | | | | | | | 11,457 | 302,293 | | | | | | | | | | | |
| 136 | Hand Held & Police Vehicle Radio | Annual | | | | | | | 1,125 | 145,797 | | | | | | | | | | | |
| 137 | Elevator Compensating Ropes | Annual | | | | | | | | | | | | | | | | | | | |
| 138 | PRV Modernization - Overhauls | Annual | | | | | | 768,539 | 316,530 | 1,189,830 | 1,388,559 | 1,592,000 | 1,141,000 | 345,000 | | | | | | | |
| 139 | Jumper Hardware repairs on Hoover-Mead #6 & #8 ** | Annual | | | | | 698,728 | | 1,615 | | | | | | | | | | | | |
| 140 | Western Integrated Network/Cribcal Infrastructure Protection(WINCIP) ** | Annual | | | | | 54,394 | 110,597 | 1,555 | 4,292 | 11,806 | | | | | | | | | | |
| 141 | Unit A8 Wide Head Turbine | Annual | | | | | | | 30,792 | 1,213,051 | 1,829,824 | 260,000 | | | | | | | | | |
| 142 | Unit Station Service Transfer Bus Breakers | Annual | | | | | | 106 | 84,747 | 121,202 | 2,603,098 | | | | | | | | | | |
| 143 | Control Center HVAC | Annual | | | | | | | 9,550 | 10,735 | 173,194 | | | | | | | | | | |
| 144 | A2,A4,A7 PRV Modernization | Annual | | | | | | | | 373 | 325,455 | | 1,344,000 | 1,838,000 | 2,067,000 | 841,000 | | | | | |
| 145 | Escalator Replacement | Annual | | | | | | | | 0 | | | 30,000 | 560,000 | | | | | | | |
| 146 | Larus 5702 Microwave/Fiber Optic Switches Replacement | Annual | | | | | | | | 0 | | | | | | | | | | | |
| 147 | Chiller & Control System Replacement | Annual | | | | | | | | 9,476 | 342,809 | | | | | | | | | | |
| 148 | Hoover-Mead Erosion on T-Lines ** | Annual | | | | | | | | 74,744 | 478,492 | | | | | | | | | | |
| 149 | MOI Equipment Transfer ** | Annual | | | | | | | 31,214 | (991) | | | | | | | | | | | |
| 150 | Channel Bank ** | Annual | | | | | | | | 21,755 | | | | | | | | | | | |
| 151 | PRV Draft Tube Mandoor | Annual | | | | | | | | 103,813 | 6,971 | | | | | | | | | | |
| 152 | Facilities Rating Mitigation ** | Annual | | | | | | | | 24,591 | 268,758 | | | | | | | | | | |
| 153 | Drum Gate Repair & Component Replacement | Multi-Year | | | | | | | | | | 100,000 | 1,850,000 | 2,572,000 | 2,695,000 | 2,722,000 | 1,451,000 | | | | |
| 154 | Fire Alarm Panel Replacement | Annual | | | | | | | | | | 500,000 | | | | | | | | | |
| 155 | Transformer Relay Replacements (MED 8) | Annual | | | | | | | | | | | 200,000 | | | | | | | | |
| 156 | Hoover-Mead #1-8 Jumper Replacement ** | Multi-Year | | | | | | | | | -8,876 | 400,000 | 500,000 | | | | | | | | |
| Total Replacements Cost Repayable to the U.S. Treasury | | | 4,515,896 | 3,457,113 | 6,000,752 | 7,198,353 | 6,396,220 | 6,545,020 | 5,395,720 | 6,718,065 | 11,171,364 | 8,754,000 | 14,542,000 | 14,372,000 | 12,322,000 | 10,514,000 | 5,090,000 | 1,548,000 | 1,534,000 | 1,901,000 | 1,010,000 |
| Western's Replacements ** | | | | | | | | | | | | | | | | | | | | | |
| Total Replacements Cost Reported in PRS (does not include Western's replacements) | | | 4,465,460* | 3,081,496* | 5,466,304* | 6,817,934* | 5,485,897* | 7,482,000* | 9,533,000* | 12,119,000* | 10,386,696* | 8,354,000* | 13,842,000* | 13,972,000* | 11,922,000* | 10,114,000* | 4,690,000* | 1,148,000* | 1,134,000* | 1,501,000* | 610,000* |
| | | Reclamation | | | | | 5,485,897 | 6,161,066 | 5,024,202 | 6,329,748 | 10,386,696 | 8,354,000 | 13,842,000 | 13,972,000 | 11,922,000 | 10,114,000 | 4,690,000 | 1,148,000 | 1,134,000 | 1,501,000 | 610,000 |
| | | Western | | | | | 910,323 | 383,954 | 371,518 | 388,317 | 784,668 | 400,000 | 700,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 | 400,000 |
| | | | | | | | 6,396,220 | 6,545,020 | 5,395,720 | 6,718,065 | 11,171,364 | 8,754,000 | 14,542,000 | 14,372,000 | 12,322,000 | 10,514,000 | 5,090,000 | 1,548,000 | 1,534,000 | 1,901,000 | 1,010,000 |