

CRESCENTA VALLEY WATER DISTRICT

2700 FOOTHILL BOULEVARD
LA CRESCENTA, CALIFORNIA

Agenda for the Meeting of the Engineering Committee
of the Crescenta Valley Water District

To be held on

January 29, 2016 at 8:30 AM

Posted January 28, 2016 at 10:00 am

Call to Order

Adoption of Agenda

Information Items

1. Status of Groundwater Wells and Well Capacity
2. Review of FY 15/16 – CIP Project Costs and Schedule
3. Review of CVWD's Prop. 50 and Prop 84 Grants Costs and Schedule
4. Review of Preliminary 16/17 CIP Program and 10-yr CIP Program

Public Comments

At this time, members of the public shall have an opportunity to address the Committee on items of interest that are within the subject matter jurisdiction of this Committee. This opportunity is non-transferable and speakers are limited to three (3) minutes each.

Committee Member's Request for Future Agenda Items

Next Engineering Committee Meeting – March 11, 2016

Adjournment

CRESCENTA VALLEY WATER DISTRICT

STAFF REPORT

January 29, 2016

To: Engineering Committee
From: David S. Gould, P.E. – District Engineer
Subject: Groundwater Well Update and Capital Improvement Project Program Update

1. Groundwater Well Level and Well Capacity

Attached for review are the static and pumping well levels for CVWD's groundwater wells for the period from 2000 to 2015. The static levels for the majority of the wells have decreased to the lowest levels in 15 years. This is mainly due to the 5-year drought which has been experienced in the Crescenta Valley and State-wide.

The well capacity, which is the amount of water that can be pumped from the ground, has also decreased by 40% during 2015 as shown on the attached graph. In an effort to improve well capacity, a variable speed drive for the booster pump has been installed to allow variable flow out of the Mills plant and to keep Wells 1, 7, & 9 in service.

2. Review of FY 15/16 – CIP Project Cost and Schedule

Staff has prepared a summary of the FY 15/16 Capital Improvement Projects (CIP) program for discussion, which includes amounts that will be reimbursed from CVWD's grants. Staff's goal was to stay within the budget amount of \$1.8M and in order to meet that goal; a number of planned projects were deferred to FY 16/17. Projects deferred include rehabilitation of Well 7, booster pump replacement, and other smaller projects. Also, new projects were added such as the Lower Pickens Canyon Crossing Replacement and the new nitrate removal treatment plant at Well 2. Staff also prepared an updated project schedule which shows the status of each project for discussion.

3. Review of CVWD's Prop. 50 and Prop 84 Grants Costs and Schedule

Staff has prepared a summary of the grants which CVWD has received since 2002 and the status of each grant project for discussion. The summary shows the three (3) Local Groundwater Assistance grants which were used to get a better understanding of the Verdugo Basin and the recent grants received through Proposition 84, Integrated Regional Water Management Program (IRWMP). The summary also shows the amount of grant money awarded, which is over \$3M and the amount of grant money which has been reimbursed.

4. Review of Preliminary 16/17 CIP Program and 10-YR CIP Program

Staff has prepared a preliminary CIP program for the upcoming FY 16/17 budget and a preliminary 10-YR CIP program for discussion with the Engineering Committee. Staff performed an analysis of the water system which looks into the replacement life cycle of pipelines, booster pumps, reservoirs, groundwater wells, the telemetry system, and installation of an automated meter reading (AMR) system. The analysis shows that CVWD's CIP program should be spending between \$3.4M to \$4.3M per year to maintain the water system and its facilities. Staff is looking for input from the Engineering Committee regarding the preliminary FY 16/17 CIP budget.

Prepared & Submitted by:



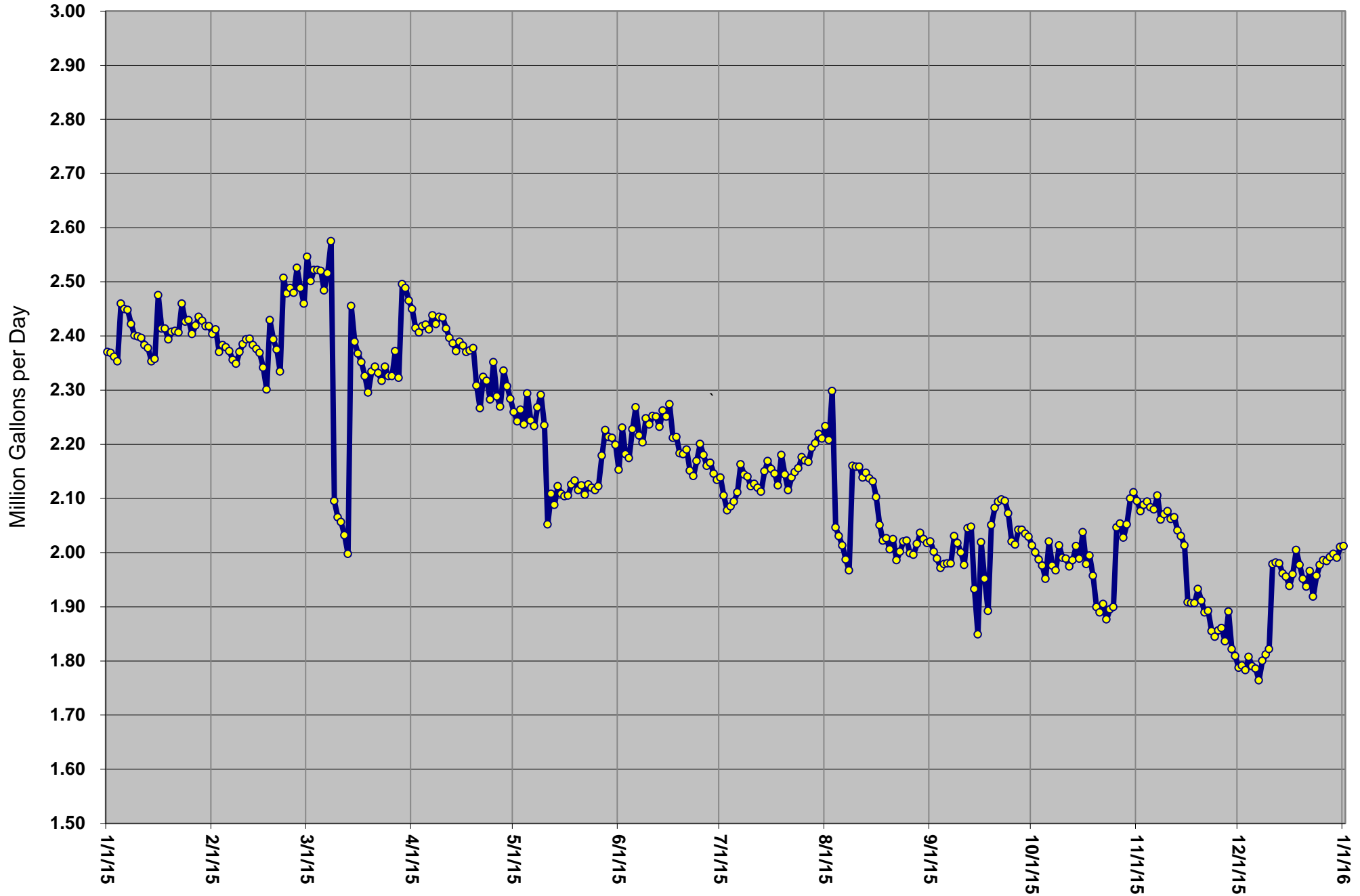
David S. Gould, P.E.
District Engineer

Attachments:

1. FY 15/16 CIP Cost and Project Schedule – Revised 12/31/15
2. Summary of CVWD's Grant Program – Revised 12/31/15
3. Preliminary FY 16/17 and 10-YR CIP Budget

Groundwater Well Level
and
Well Capacity

Crescenta Valley Water District 2015 Well Capacity Status (MGD)

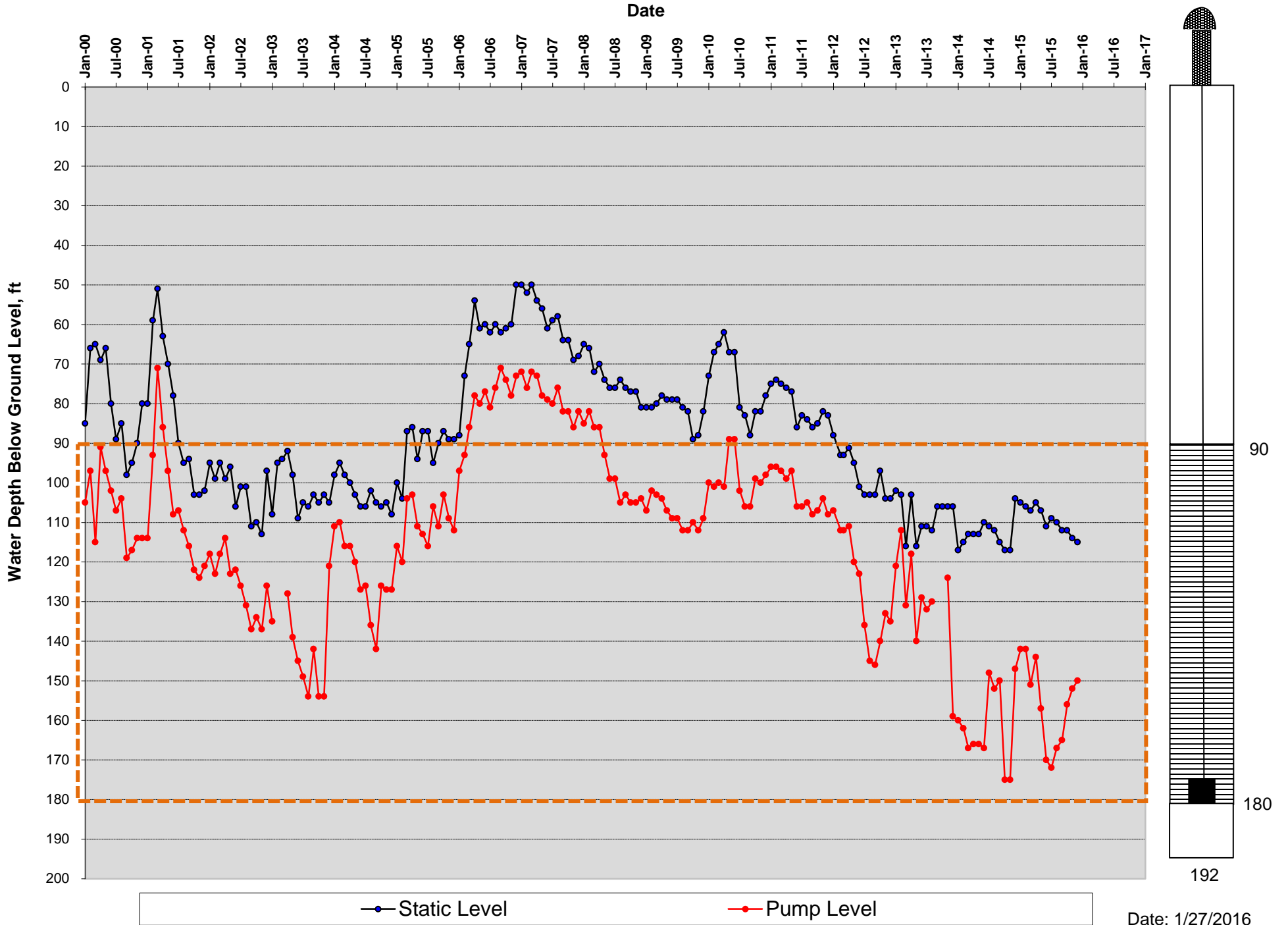


Crescenta Valley Water District

Groundwater Well Inventory

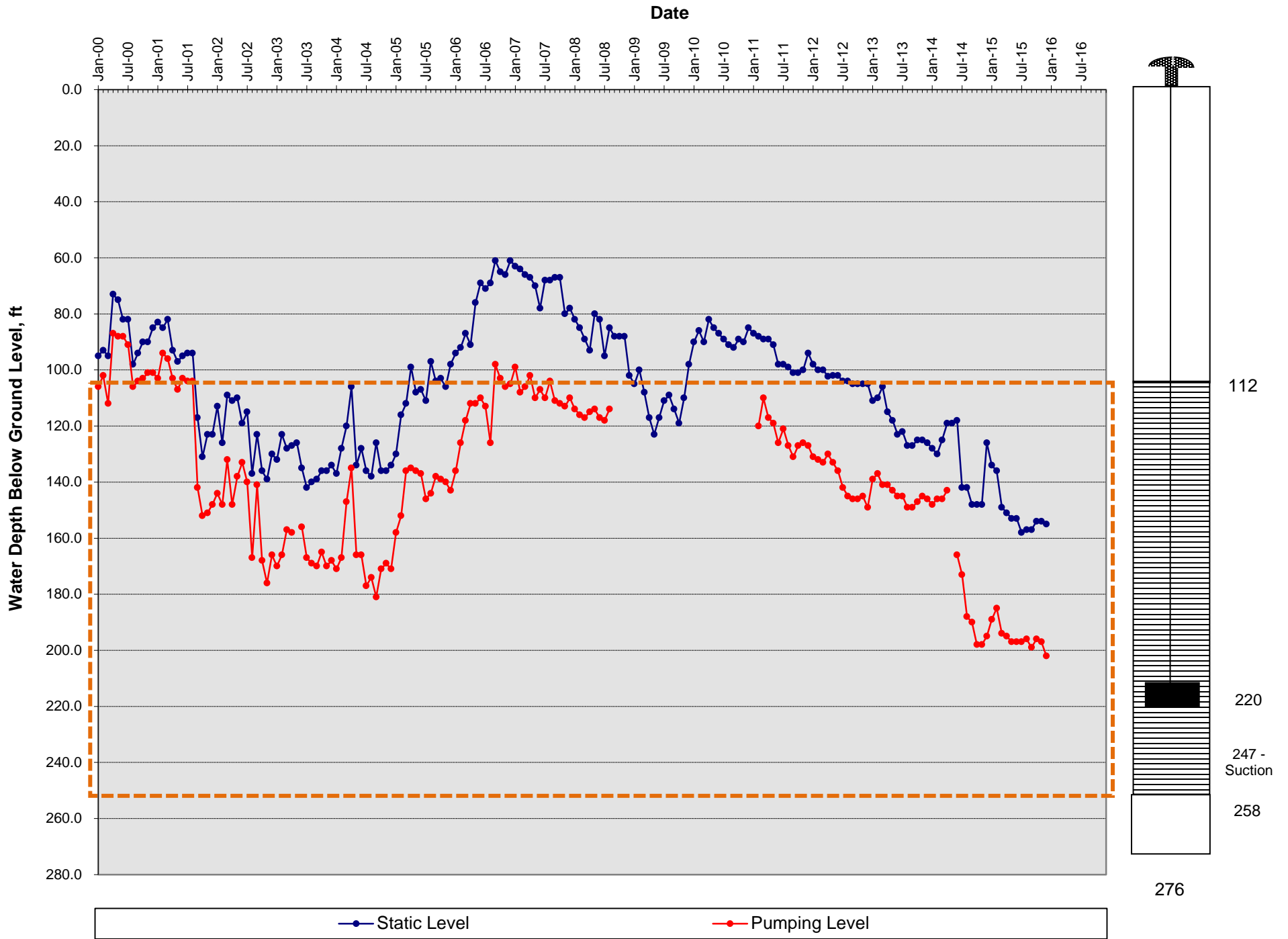
| Well No. | LA County Well No. | Date Well Drilled | Drilling Method | Casing Diameter | Record Depth of Casing | Record Screen Intervals | Date of New Pump, Shaft, Column | Design Well Capacity | Current Pump Rate (Jan 2016) |
|----------|--------------------|-------------------|---|-----------------|------------------------|-------------------------------------|---------------------------------|----------------------|------------------------------|
| 1 | 5058B | 1931 | Cable Tool W/Mills Knife Perforations | 16" | 192' | 101'-192' | Aug-13 | 350 gpm | 155 gpm |
| 2 | 5036A | 1927 | Cable Tool W/Mills Knife Perforations | 14" | 148' | 60' - 141' | | Inactive | |
| 5 | 5058H | 1949 | Cable Tool W/Mills Knife Perforations | 20" | 276' | 112'-258' | May-14 | 450 gpm | 370 gpm |
| 6 | 5058 | 1949 | Cable Tool W/Mills Knife Perforations | 20" | 162' | 100'-142' | Aug-04 | 80 gpm | 40 gpm |
| 7 | 5047B | 1930 | Cable Tool W/Mills Knife Perforations | 16" | 196' | 110'-196' | Feb-05 | 350 gpm | 255 gpm |
| 8 | 5069J | 1951 | Cable Tool W/Mills Knife Perforations | 16" | 260' | 143'-243' | Sep-15 | 350 gpm | 140 gpm |
| 9 | 5047D | 1945 | Cable Tool W/Mills Knife Perforations | 20" | 262' | 100'-123' 127'-164' 227'-254' | May-14 | 150 gpm | 115 gpm |
| 10 | 5058D | 1945 | Cable Tool W/Mills Knife Perforations | 20" | 204' | 90'-192' | Mar-12 | 350 gpm | 95 gpm |
| 11 | 5058E | 1946 | Cable Tool W/Mills Knife Perforations | 20" | 198' | 82'-135' 160'-168' | Aug-10 | 300 gpm | 70 gpm |
| 12 | 5058J | 1948 | Rotary Drilled W/Mills Knife Perforations | 16" | 615' | 96'-501' | Dec-12 | 250 gpm | 75 gpm |
| 14 | 5069F | 1950 | Cable Tool W/Mills Knife Perforations | 16" | 267' | 138'-177' 196'-199' 218'-248' | Aug-12 | 250 gpm | 115 gpm |
| 15 | | 2000 | Reverse Rotary w/louvres | 12" | 250' | 135' - 225' | Feb-02 | 110 gpm | Out of Service |
| 16 | | 2011 | Reverse Rotary w/louvres | 12" | 375' | 220' - 350' | Feb-16 | 450 gpm | Not in Service |

Well 1: 2000 - 2015 - Static and Pumping Levels



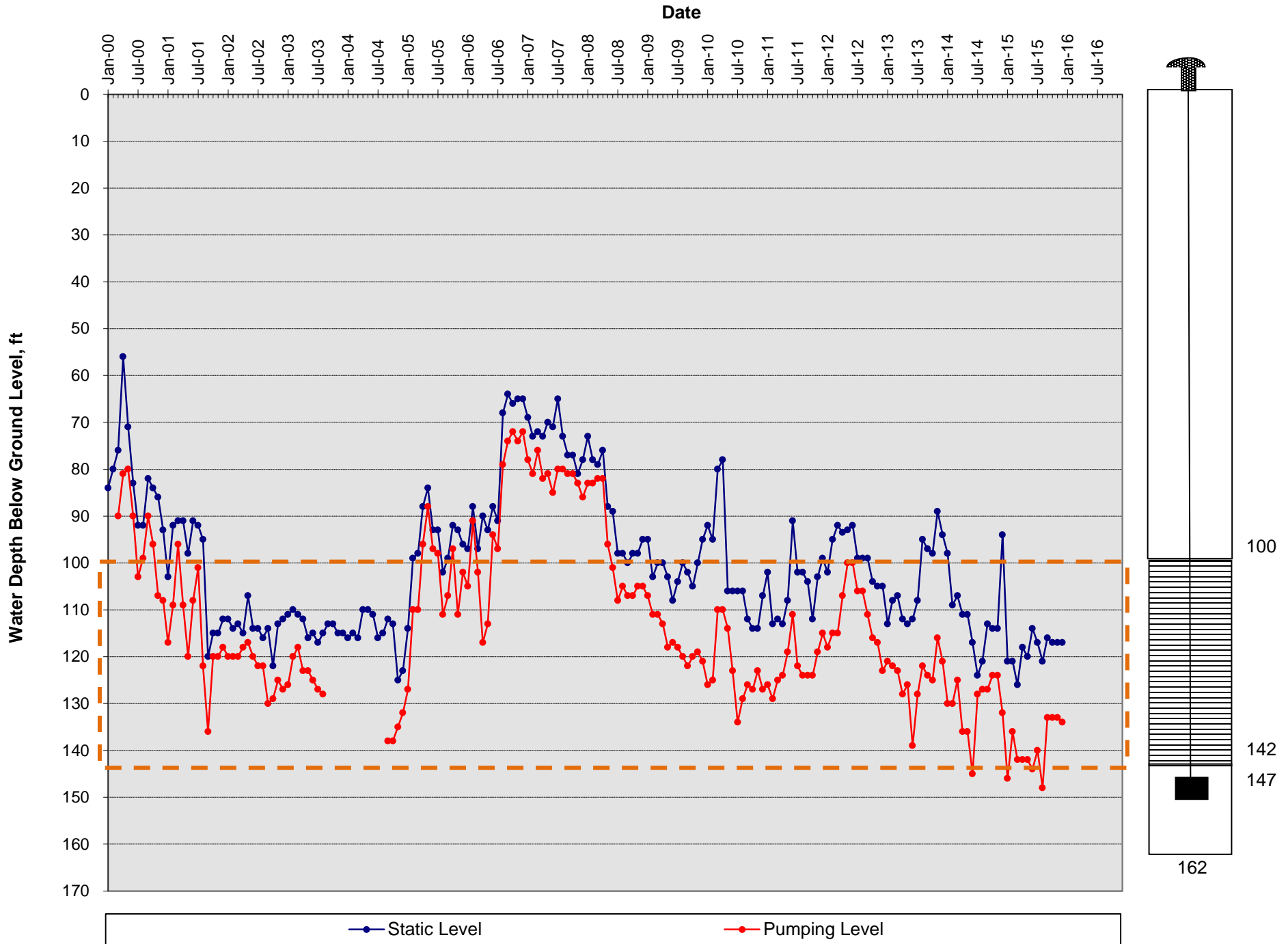
Date: 1/27/2016

Well 5: 2000 - 2015 - Static and Pumping Levels

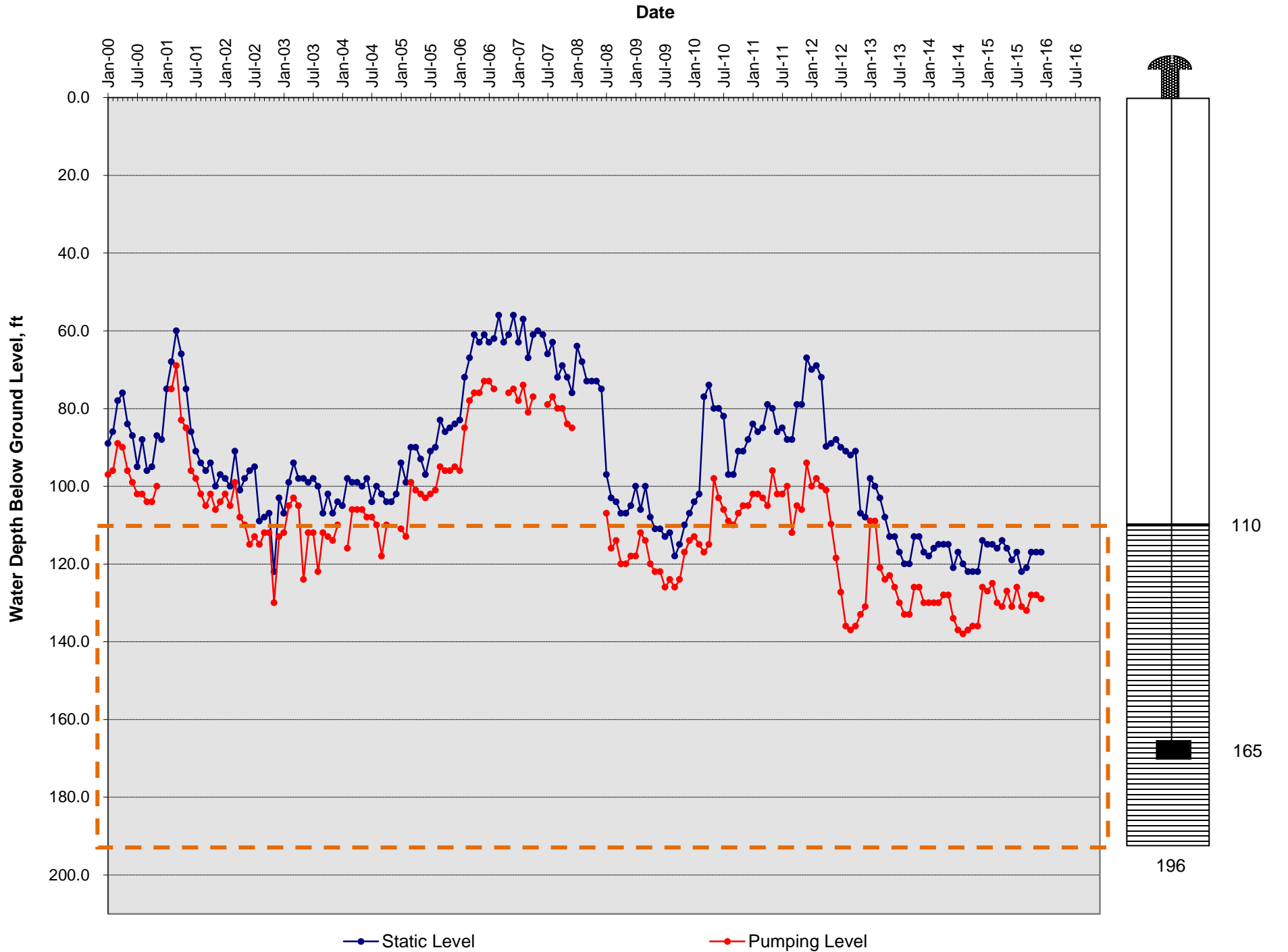


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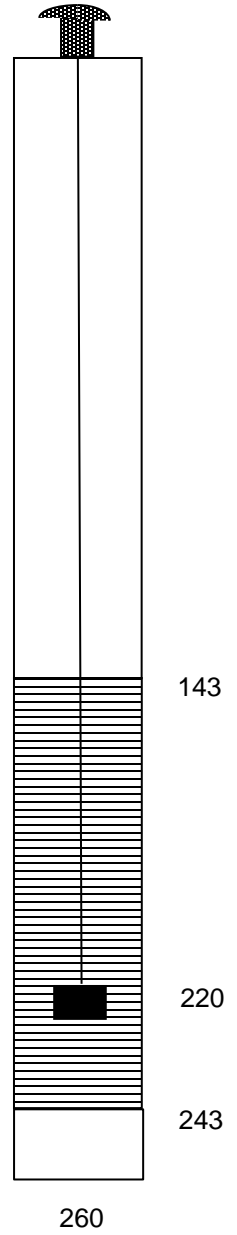
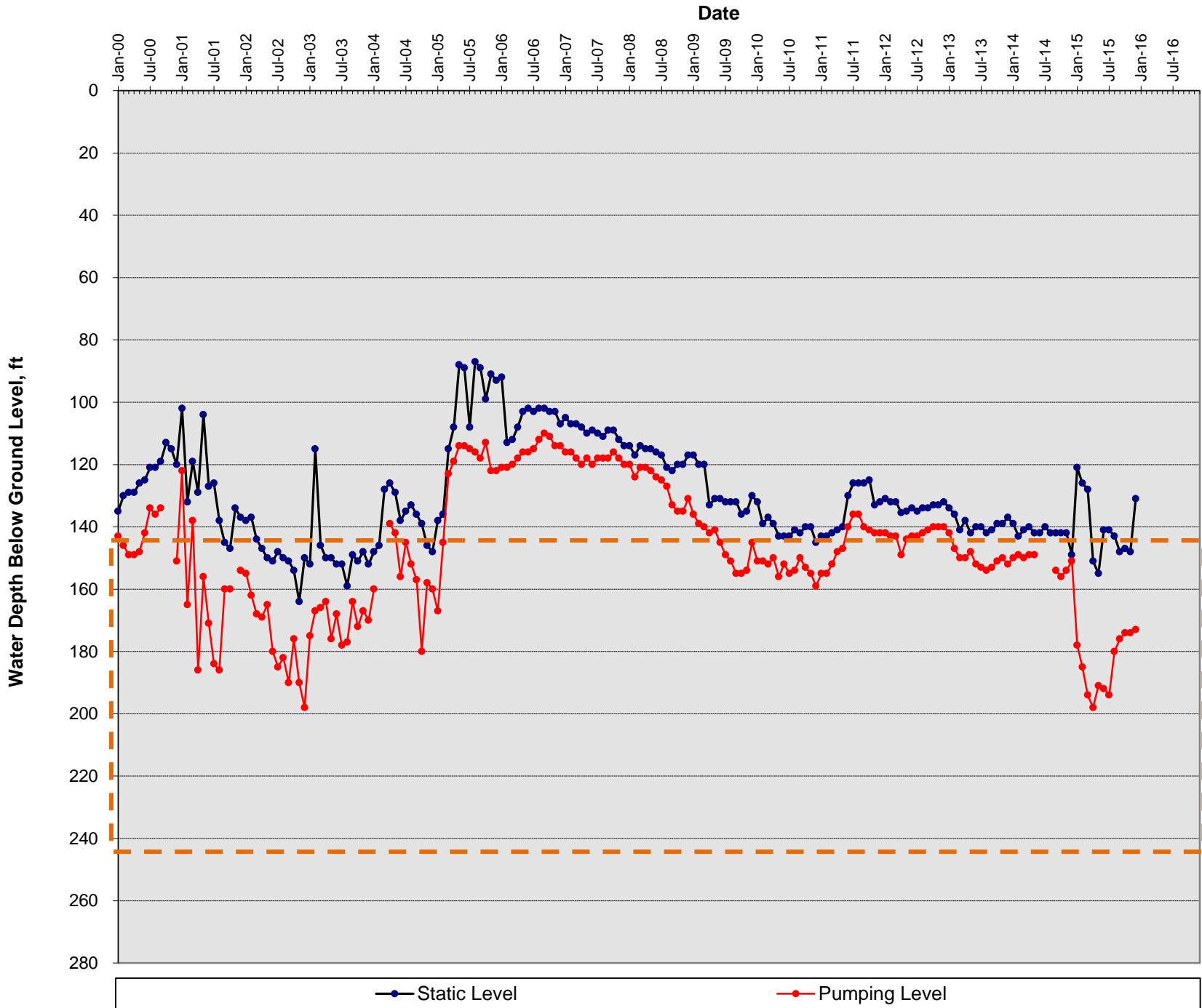
Well 6: 2000 - 2015 - Static and Pumping Levels



Well 7: 2000 - 2015 - Static and Pumping Levels

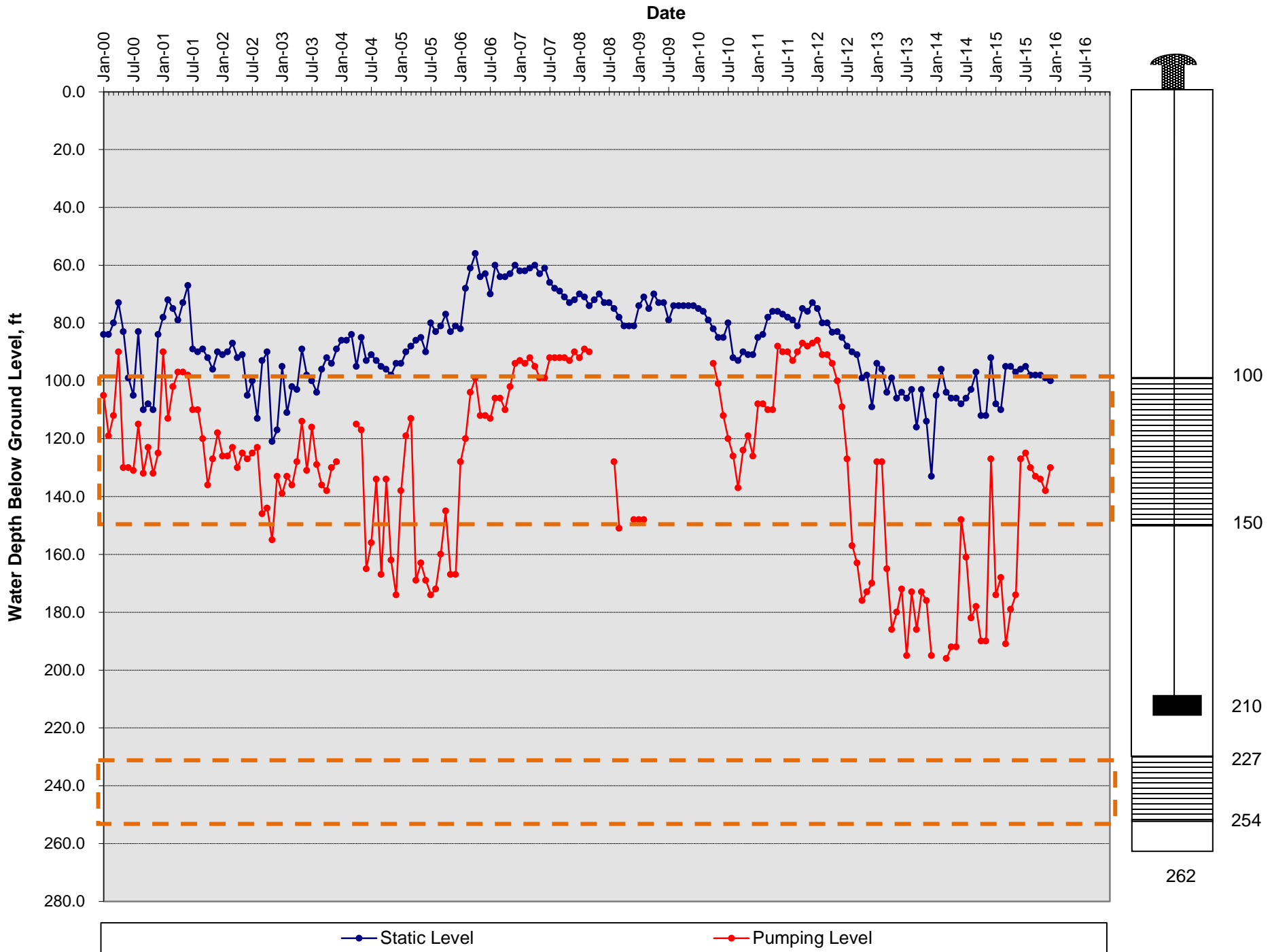


Well 8: 2000 - 2015 - Static and Pumping Levels

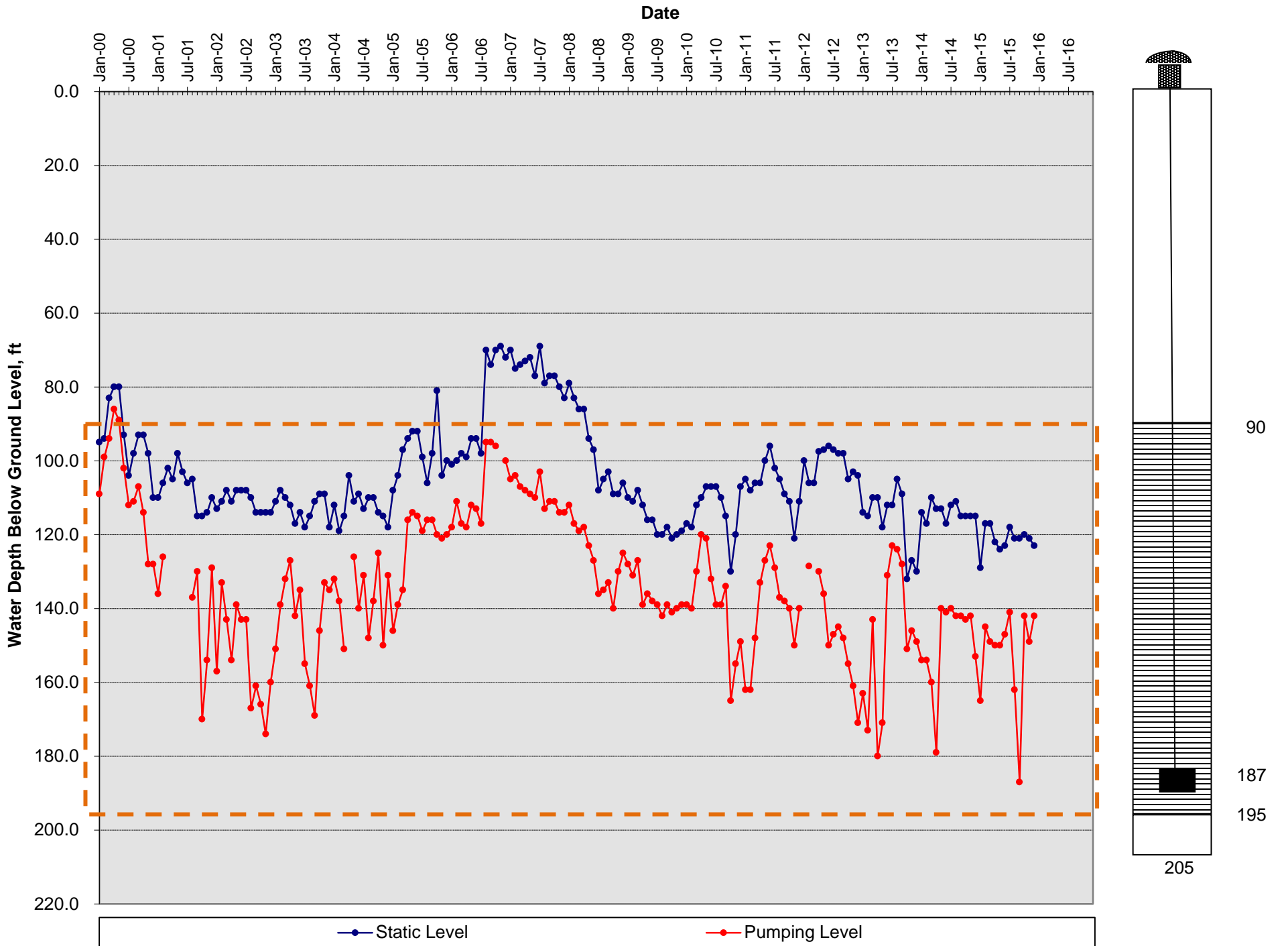


Date: 1/27/2016

Well 9: 2000 - 2015 - Static and Pumping Levels

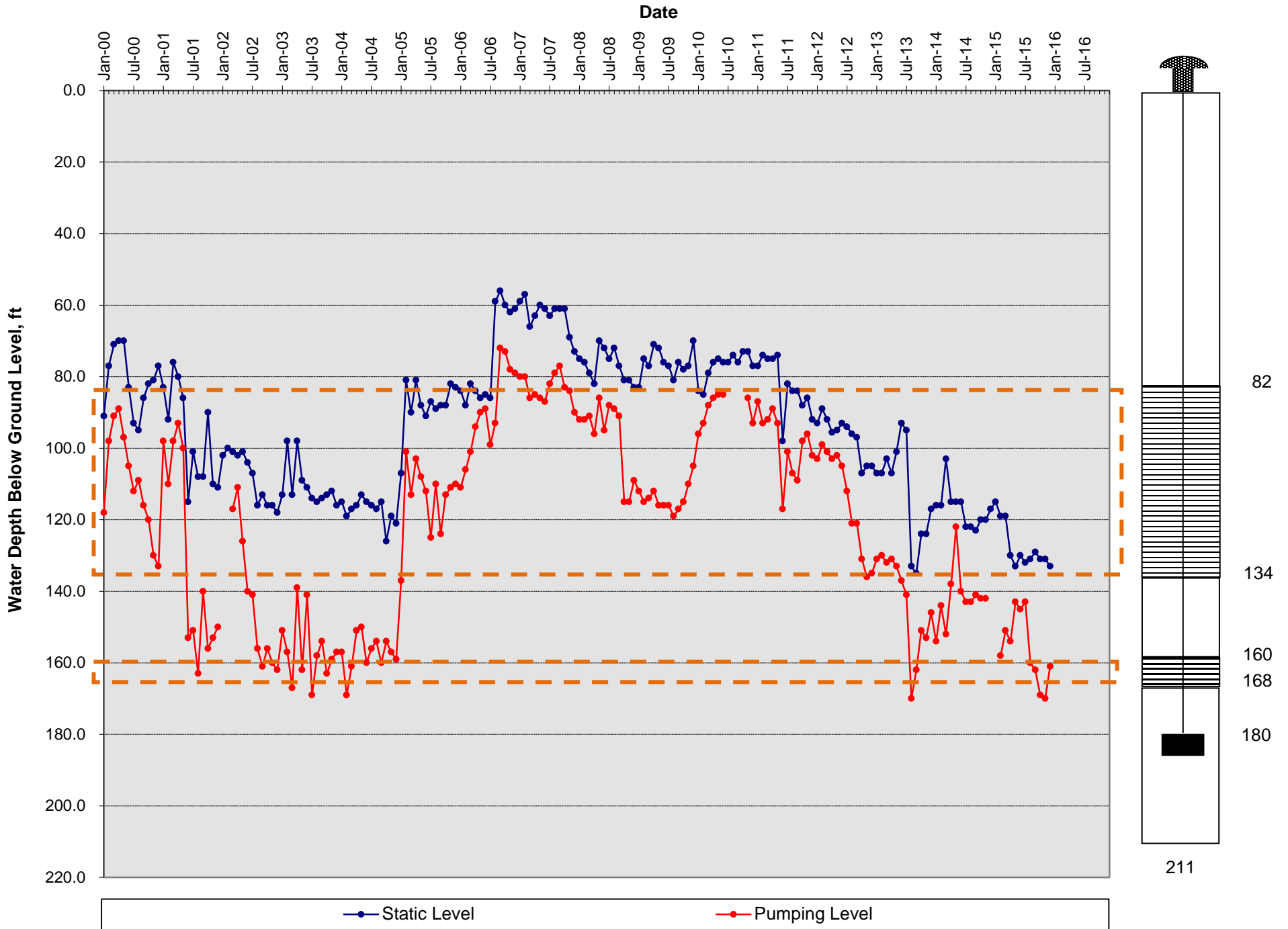


Well 10: 2000 - 2015 - Static and Pumping Levels

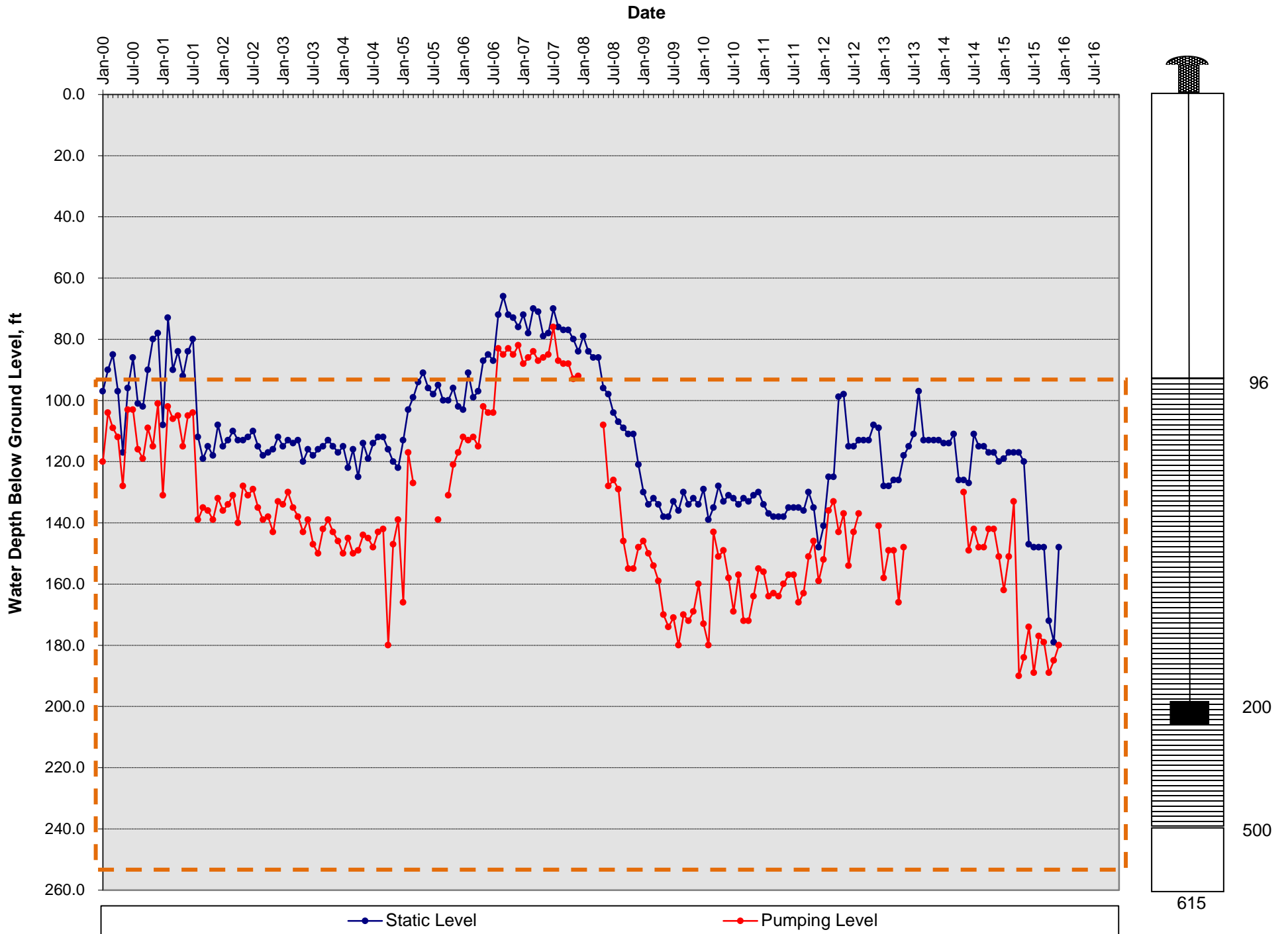


Date: 1/27/2016

Well 11: 2000 - 2015 - Static and Pumping Levels

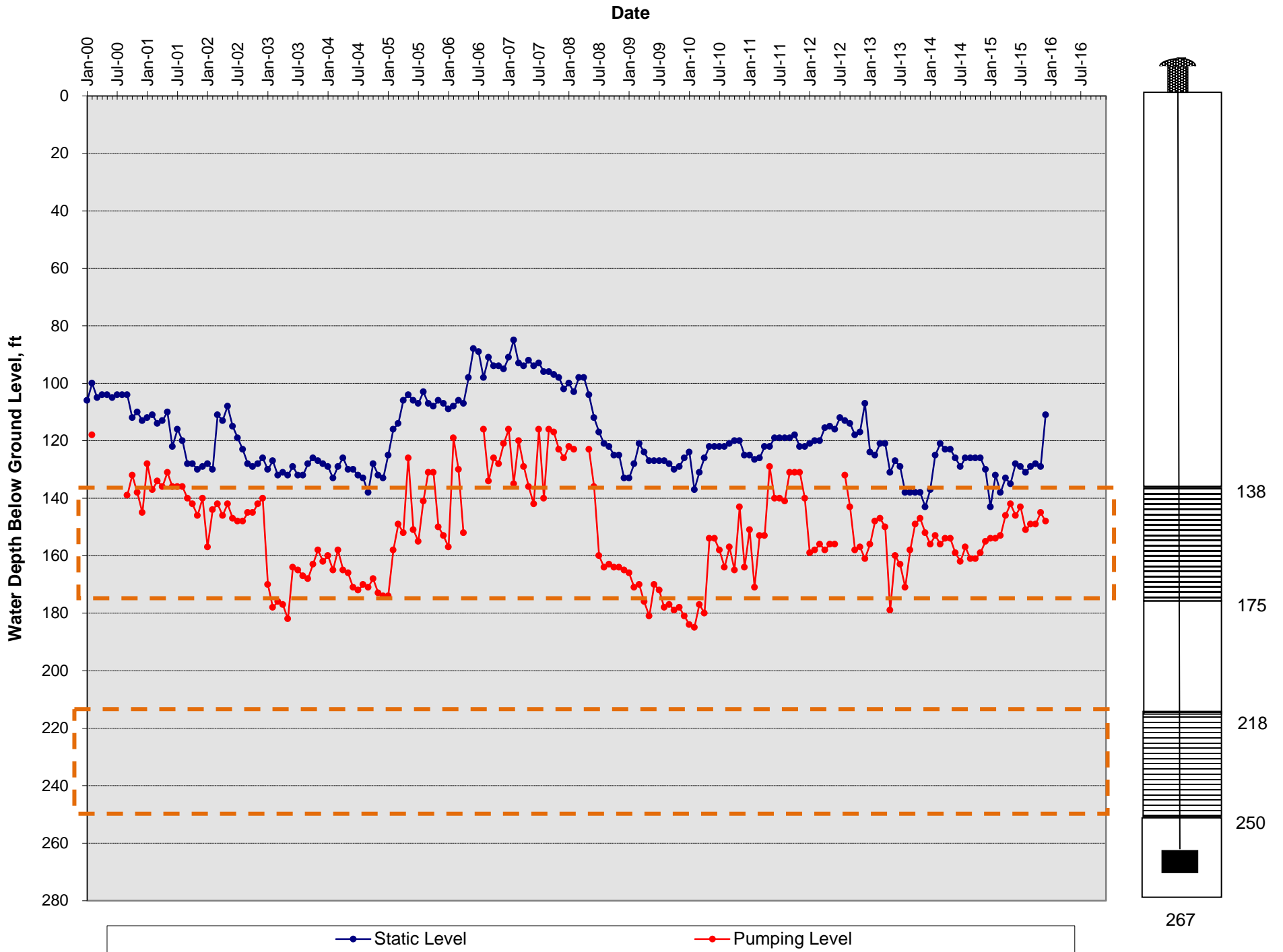


Well 12: 2000 - 2015 - Static and Pumping Levels



Date: 1/27/2016

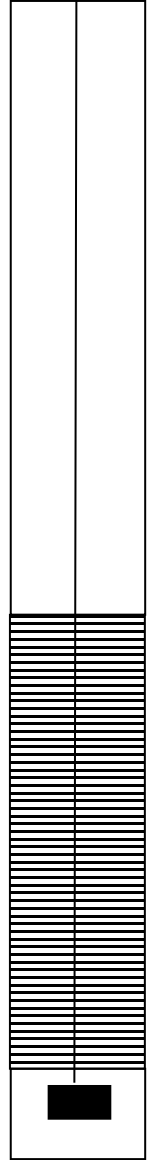
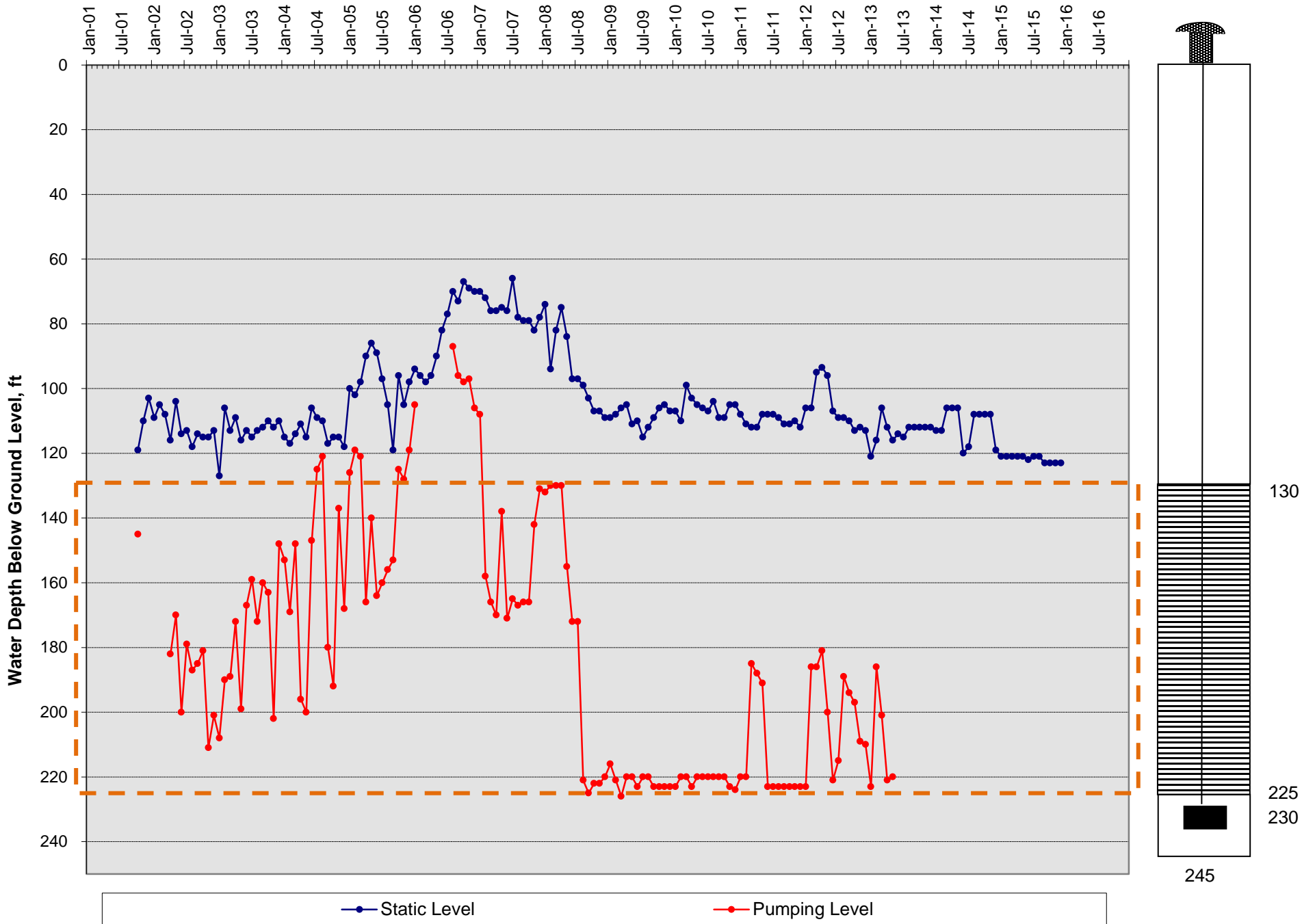
Well 14: 2000 - 2015 - Static and Pumping Levels



Date: 1/27/2016

Well 15: 2000 - 2013 - Static and Pumping Levels

Date



130

225

230

245

Static Level

Pumping Level

Date: 1/27/2016

FY 15/16 – CIP Project

Cost and Schedule

| Capital Improvement Project Program FY 15-16 - Updated 12/31/15 | | E-Job | Budget FY 15/16 | Cost to date 7/1/15 - 12/31/15 | Cost Committed - 12/31/15 - 6/30/16 | Grant Reimburse - FY 15/16 | Cost Remaining |
|--|--|-----------|--------------------|--------------------------------------|--|----------------------------------|-------------------|
| 1. Water Supply | | | | | | | |
| A. Groundwater | | | | | | | |
| i. Well Rehabilitation | | | | | | | |
| | <i>Well 11 Rehabilitation</i> | E-934 | \$ - | \$ 14,954 | \$ - | \$ - | \$ (14,954) |
| | <i>Well 7 Rehabilitation</i> | | \$ 60,000 | \$ - | \$ - | \$ - | \$ 60,000 |
| ii. New Wells | | | | | | | |
| | <i>Well 16 - Equipment & Pipeline (Grant - Matching Funds)</i> | E-940 | \$ 60,000 | \$ 337,223 | \$ 97,000 | \$ (325,000) | \$ (49,223) |
| | <i>Well 16 - Construction (Grant - Matching Funds)</i> | E-940 | \$ 100,000 | \$ 449,529 | \$ 416,300 | \$ (550,000) | \$ (215,829) |
| | <i>Re-Activate Well 2 - Design (Grant - Matching Funds)</i> | E-956 | \$ - | \$ 10,886 | \$ 103,114 | \$ - | \$ (114,000) |
| | <i>Re-Activate Well 2 - Construction (Grant - Matching Funds)</i> | E-956 | \$ - | \$ - | \$ 312,500 | \$ - | \$ (312,500) |
| iii. Studies | | | | | | | |
| B. Imported Water | | | | | | | |
| | <i>CVWD/LADWP Inter. at Ordunio (Grant - Matching Funds)</i> | E-766 | \$ 125,000 | \$ - | \$ 75,000 | \$ (187,700) | \$ 237,700 |
| | <i>Ocean View Piping & Vaults (Grant - Matching Funds)</i> | E-733CS-1 | \$ - | \$ - | \$ - | \$ - | \$ - |
| | <i>Ocean View Chlorination St (Grant - Matching Funds)</i> | E-733CS-2 | \$ 85,000 | \$ 25,848 | \$ 190,300 | \$ (94,400) | \$ (36,748) |
| | <i>Ocean View - Equip. (Grant - Matching Funds)</i> | E-733CS-3 | \$ 35,000 | \$ 10,152 | \$ 33,510 | \$ (37,500) | \$ 28,838 |
| | <i>Ocean View - Elect (Grant - Matching Funds)</i> | E-733CS-4 | \$ 40,000 | \$ 19,979 | \$ 69,600 | \$ (37,500) | \$ (12,079) |
| C. Groundwater Basin Recharge | | | | | | | |
| | <i>Storm Water Recharge Study (Grant - Matching Funds)</i> | M-903A | \$ 40,000 | \$ 21,174 | \$ 91,400 | \$ (93,900) | \$ 21,326 |
| D. Recycled Water System | | | | | | | |
| E. Demand Management | | | | | | | |
| WS Total | | | \$ 545,000 | \$ 889,745 | \$ 1,388,724 | \$ (1,326,000) | \$ (407,469) |
| 2. Water Storage | | | | | | | |
| A. Reservoir Rehabilitation | | | | | | | |
| B. Reservoir Water Quality | | | | | | | |
| C. New Reservoir Water Storage | | | | | | | |
| WS Total | | | \$ - | \$ - | \$ - | \$ - | \$ - |

| Capital Improvement Project Program FY 15-16 - Updated 12/31/15 | E-Job | Budget FY 15/16 | Cost to date 7/1/15 - 12/31/15 | Cost Committed - 12/31/15 - 6/30/16 | Grant Reimburse - FY 15/16 | Cost Remaining |
|--|-------|--------------------|--------------------------------------|--|----------------------------------|-------------------|
| 3. Water Distribution | | | | | | |
| A. Pipeline Replacement | | | | | | |
| <i>3000 Block-Paraiso Way, Cloud, & Ramsdell</i> | E-947 | \$ - | \$ 1,796 | \$ - | \$ - | \$ (1,796) |
| <i>2600 Block - Harmony Place - 450 LF</i> | E-960 | \$ 115,000 | \$ 5,845 | \$ 120,000 | \$ - | \$ (10,845) |
| <i>3900 Block - Park Place - 450 LF</i> | E-960 | \$ 115,000 | \$ 5,845 | \$ 120,000 | \$ - | \$ (10,845) |
| <i>3700 Block - Glenwood Avenue - 800 LF</i> | E-960 | \$ 175,000 | \$ 5,845 | \$ 212,300 | \$ - | \$ (43,145) |
| <i>2800 Block - Prospect & 4400 Block - Glenwood - 700 LF</i> | E-961 | \$ 200,000 | \$ 4,846 | \$ 185,800 | \$ (75,000) | \$ 84,354 |
| <i>Lower Pickens Canyon Pipeline Repair</i> | E-957 | \$ - | \$ 43,143 | \$ 81,857 | \$ - | \$ (125,000) |
| B. New Pipelines | | | | | | |
| C. Booster Pump System | | | | | | |
| i. Annual Pump /Motor Replacement | | | | | | |
| <i>1 - Boosters</i> | | \$ 25,000 | \$ - | \$ - | \$ - | \$ 25,000 |
| iv. MCC Replacement | | | | | | |
| <i>MCC upgrade at Oak Creek</i> | E-931 | \$ 185,000 | \$ 99,356 | \$ - | \$ - | \$ 85,644 |
| D. Pressure Reducing Stations | | | | | | |
| E. Miscellaneous Projects | | | | | | |
| i. Water Surge Control | | | | | | |
| <i>Rehabilitation Surge Tanks at Glenwood</i> | | \$ 65,000 | \$ - | \$ - | \$ - | \$ 65,000 |
| WD Total | | \$ 880,000 | \$ 166,675 | \$ 719,957 | \$ (75,000) | \$ 68,368 |
| 4. Water Treatment | | | | | | |
| A. Nitrate Removal | | | | | | |
| B. Chlorine Disinfection | | | | | | |
| C. Convert to Chloramines | | | | | | |
| D. New Federal and State Regulations | | | | | | |
| E. Water Quality Studies | | | | | | |
| F. MTBE Removal | | | | | | |
| WT Total | | \$ - | \$ - | \$ - | \$ - | \$ - |

| Capital Improvement Project Program FY 15-16 - Updated 12/31/15 | E-Job | Budget FY 15/16 | Cost to date 7/1/15 - 12/31/15 | Cost Committed - 12/31/15 - 6/30/16 | Grant Reimburse - FY 15/16 | Cost Remaining |
|--|-------|--------------------|--------------------------------------|--|----------------------------------|-------------------|
| 5. Technology | | | | | | |
| A. Automated Meter Information (AMI) System | | | | | | |
| B. Supervisory Control and Data Acquisition (SCADA) System | | | | | | |
| SCADA RTU Replacement (35 sites) - Design | E-939 | \$ 15,000 | \$ - | \$ - | \$ - | \$ 15,000 |
| SCADA RTU Replace - Equipment & Integration | E-939 | \$ 300,000 | \$ 28,533 | \$ 27,467 | \$ - | \$ 244,000 |
| C. Graphical Information System (GIS) | | | | | | |
| TECH Total | | \$ 315,000 | \$ 28,533 | \$ 27,467 | \$ - | \$ 259,000 |
| 6. Public Safety/Emergency Response | | | | | | |
| A. Emergency Electrical Generators | | | | | | |
| B. Water Storage | | | | | | |
| Seismic Sensors & Valve Actuators - Duns/Pickens | | \$ 75,000 | \$ - | \$ - | \$ - | \$ 75,000 |
| C. Security | | | | | | |
| D. Miscellaneous | | | | | | |
| SF/ER Total | | \$ 75,000 | \$ - | \$ - | \$ - | \$ 75,000 |
| 7. Facilities & Planning | | | | | | |
| A. Main Office | | | | | | |
| B. Glenwood Plant | | | | | | |
| C. Mills Plant | | | | | | |
| D. Reservoir Site Improvements | | | | | | |
| F & P Total | | \$ - | \$ - | \$ - | \$ - | \$ - |
| Capital Improvement Projects - Total | | \$ 1,815,000 | \$ 1,084,953 | \$ 2,136,148 | \$ (1,401,000) | \$ (5,101) |
| Budget Amount in Cashflow Model | | \$ 1,815,000 | | \$ 3,221,101 | \$ (1,401,000) | \$ 1,820,101 |
| Amount over/under Budget | | \$ - | | | | \$ (5,101) |

CVWD's Prop. 50

And

Prop 84 Grants

Costs and Schedule

Crescenta Valley Water District

Summary of CVWD's Grant Program

| ID No. | E-Job No. | Project Title | Project Description | Funding | Start Date | End Date | Status | Consultant | Contact Person | Original Project Amount | Grant Amount | CVWD Amount | CVWD Expenditures to Date | Grant Reimbursement to Date | CVWD Amount as part of Grant to Date | Actual Total Amount of Project (Estimate) | Actual Total Amount of Grant Reimbursement | Actual CVWD Amount (Estimate) |
|--------------|-------------------|---|---|---|------------|----------|--------------|---------------------------|----------------|-------------------------|--------------|-------------|---------------------------|-----------------------------|--------------------------------------|---|--|-------------------------------|
| 1 | E-696 | Verdugo Basin Groundwater Evaluation and Monitoring Project | Installation of Monitoring Wells - MW-1, MW-2 & MW-4 | AB303 - Local Groundwater Management Assistance Act of 2000 | Oct-02 | Jun-04 | Complete | Bookman-Edmonton, Inc | Tom Regan | \$250,000 | \$250,000 | \$0 | \$347,531 | \$250,000 | \$0 | \$347,531 | \$250,000 | \$97,531 |
| 2 | E-713 | Verdugo Basin Groundwater Storage and Conjunctive Use Feasibility Study | Evaluate the potential of developing a supplemental recharge and conjunctive use program in the Verdugo Basin. Include Groundwater Model | AB303 - Local Groundwater Management Assistance Act of 2000 | Jan-04 | May-05 | Complete | Geomatic, Inc | Greg Hamer | \$185,000 | \$185,000 | \$0 | \$198,732 | \$185,000 | \$0 | \$198,732 | \$185,000 | \$13,732 |
| 3 | E-760 | Verdugo Basin Geophysical Study | Geophysical Survey of Verdugo Basin including Gravity Survey, Seismic Refraction and Resistivity Survey -Information added to groundwater model | AB303 - Local Groundwater Management Assistance Act of 2000 | Aug-05 | Jun-06 | Complete | Geomatic, Inc | Greg Hamer | \$250,000 | \$250,000 | \$0 | \$250,000 | \$250,000 | \$0 | \$250,000 | \$250,000 | \$0 |
| 4 | E-766/ E-733CS | Emergency Water Supply Interconnection between LADWP, CVWD & FMWD | Water Supply interconnection with LADWP Phase 1 - LADWP/CVWD connection at Ordunio Phase 2 - Chlorination Station and connection to FMWD Phase 3 - Piping Upgrades and FMWD's P1 Station | Proposition 50 - Chapter 3 - Water Security | May-06 | Apr-16 | 50% Complete | Civiltec Engineering, Inc | David Byrum | \$1,213,850 | \$606,925 | \$606,925 | \$983,376 | \$203,678 | \$203,678 | \$1,200,000 | \$600,000 | \$600,000 |
| 5 | M-903 | Crescenta Valley County Park Stormwater Recharge Facility Study | Installation of monitoring wells, channel flow gages and percolation tests to determine if CVC Park can be used for stormwater recharge | AB303 - Local Groundwater Management Assistance Act of 2000 | Jul-12 | Jul-16 | 65% Complete | AMEC | Greg Hamer | \$272,500 | \$158,450 | \$114,050 | \$111,028 | \$64,559 | \$46,469 | \$310,000 | \$158,450 | \$151,550 |
| 6 | E-940 | Crescenta Valley Water District and Glendale Water and Power's Rockhaven Well Project | Installation of Well 16 at Rockhaven Site | Department of Water Resources - Proposition 84 Round 3 Implementation Grant Program | Jul-14 | Apr-16 | 75% Complete | Cannon Corp, Inc. | Gary Roepke | \$1,195,047 | \$873,298 | \$321,749 | \$983,338 | \$527,581 | \$194,377 | \$1,300,000 | \$873,298 | \$426,702 |
| 7 | E-956 | Nitrate Removal Treatment Facility at Well 2 Project | Install New Nitrate Removal Treatment Facility and re-activate Well 2 | Proposition 84 2015 Integrated Regional Water Management Grant Program | Jul-15 | Jun-17 | 15% Complete | SA Associates, Inc | Jorge Lovo | \$1,798,563 | \$705,775 | \$1,092,788 | \$147,511 | \$0 | \$0 | \$1,800,000 | \$705,775 | \$1,094,225 |
| Total | | | | | | | | | | \$5,164,960 | \$3,029,448 | \$2,135,512 | \$3,021,516 | \$1,480,818 | \$444,524 | \$5,406,263 | \$3,022,523 | \$2,383,740 |

Crescenta Valley Water District

Summary of Emergency Water Supply Interconnection between LADWP, CVWD & FMWD

| ID No. | E-Job No. | Project Title | Project Description | Funding | Start Date | End Date | Status | Consultant | Contact Person | Total Project Amount | Grant Amount | CVWD Amount | CVWD Expenditures to Date | Grant Reimbursement to Date | CVWD Amount as part of Grant to Date | CVWD Actual Amount (Estimate) | CVWD Actual (Over)/Under Total Project Amount |
|--------------|-----------|---------------|---|---------|------------|----------|--------------|---------------------------|----------------|----------------------|------------------|------------------|---------------------------|-----------------------------|--------------------------------------|-------------------------------|---|
| 4A | E-766 | | Phase 1 - LADWP/CVWD connection at Ordunio | | Feb-13 | Apr-16 | 50% Complete | Civiltec Engineering, Inc | Terry Kerger | \$450,000 | \$225,000 | \$225,000 | \$233,245 | \$37,245 | \$37,245 | \$308,300 | \$141,700 |
| 4B | E-733CS-1 | | Phase 2 - Chlorination Station and connection to FMWD | | Sep-15 | Nov-15 | Complete | Civiltec Engineering, Inc | Terry Kerger | \$100,000 | \$50,000 | \$50,000 | \$113,512 | \$39,164 | \$39,164 | \$113,512 | (\$13,512) |
| 4B.1 | E-733CS-1 | | Phase 2 - Chlorination Station and connection to FMWD Part 1 - Piping and Vault | | Sep-15 | Nov-15 | Complete | Civiltec Engineering, Inc | Terry Kerger | \$250,000 | \$125,000 | \$125,000 | \$266,495 | \$125,000 | \$125,000 | \$266,495 | (\$16,495) |
| 4B.2 | E-733CS-2 | | Phase 2 - Chlorination Station and connection to FMWD Part 2 - Chlorination Bldg | | Jul-15 | Mar-16 | 25% Complete | Civiltec Engineering, Inc | Terry Kerger | \$155,000 | \$77,500 | \$77,500 | \$218,910 | \$2,269 | \$2,269 | \$240,000 | (\$85,000) |
| 4B.3 | E-733CS-3 | | Phase 2 - Chlorination Station and connection to FMWD Part 3 - Purchase and Install Treatment Equipment | | Sep-15 | Mar-16 | 25% Complete | Civiltec Engineering, Inc | Terry Kerger | \$75,000 | \$37,500 | \$37,500 | \$43,661 | \$0 | \$0 | \$50,000 | \$25,000 |
| 4B.4 | E-733CS-4 | | Phase 2 - Chlorination Station and connection to FMWD Part 4 - Electrical and SCADA Equipment | | Oct-15 | Apr-16 | 25% Complete | Civiltec Engineering, Inc | Terry Kerger | \$75,000 | \$37,500 | \$37,500 | \$68,606 | \$0 | \$0 | \$75,000 | \$0 |
| 4B.5 | E-733CS-5 | | Phase 2 - Chlorination Station and connection to FMWD Part 5 - Collaborative Work Performed by CVWD Crews | | Nov-15 | Mar-16 | 75% Complete | Civiltec Engineering, Inc | Terry Kerger | \$75,000 | \$37,500 | \$37,500 | \$38,946 | \$0 | \$0 | \$45,000 | \$30,000 |
| 4B.6 | E-733CS-6 | | Phase 2 - Chlorination Station and connection to FMWD Part 6 - Other Work | | Jan-16 | Apr-16 | 0% Complete | Civiltec Engineering, Inc | Terry Kerger | \$33,850 | \$16,925 | \$16,925 | \$0 | \$0 | \$0 | \$15,000 | \$18,850 |
| Total | | | | | | | | | | \$1,213,850 | \$606,925 | \$606,925 | \$983,376 | \$203,678 | \$203,678 | \$1,113,308 | \$100,542 |

Preliminary
16/17 CIP Program
And
10-YR CIP Program

| Capital Improvement Project Program 10-year CIP Budget | | Projected FY 15/16 | Budget FY 16/17 | Forecast FY 17/18 | Forecast FY 18/19 | Forecast FY 19/20 | Forecast FY 20/21 | Forecast FY 21/22 | Forecast FY 22/23 | Forecast FY 23/24 | Forecast FY 24/25 | Forecast FY 25/26 |
|---|---|-----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1. Water Supply | | | | | | | | | | | | |
| A. Groundwater | | | | | | | | | | | | |
| i. Well Rehabilitation | | | | | | | | | | | | |
| | Well 11 Rehabilitation | \$ 14,900 | | | | | | | | | | |
| | Well 7 Rehabilitation | \$ - | | | | | | | | | | |
| | Well 7 Rehabilitation | | \$ 60,000 | | | | | | | | | |
| | Well 10 Rehabilitation | | \$ 60,000 | | | | | | | | | |
| | Well 14 Rehabilitation | | \$ 50,000 | | | | | | | | | |
| | Well 6 Rehabilitation | | | \$ 75,000 | | | | | | | | |
| | Well 12 Rehabilitation | | | \$ 75,000 | | | | | | | | |
| | Well 9 Rehabilitation | | | | \$ 75,000 | | | | | | | |
| | Well 15 Rehabilitation | | | | \$ 50,000 | | | | | | | |
| | Well 1 Rehabilitation | | | | | \$ 75,000 | | | | | | |
| | Well 14 Rehabilitation | | | | | \$ 50,000 | | | | | | |
| | Well Rehabilitation (2 Wells per year) | | | | | | \$ 150,000 | \$ 150,000 | \$ 150,000 | \$ 150,000 | \$ 150,000 | \$ 150,000 |
| ii. New Wells | | | | | | | | | | | | |
| | Well 16 - Equipment & Pipeline - Design | \$ 169,200 | | | | | | | | | | |
| | Well 16 - Construction (Grant - Matching Funds) | \$ 315,800 | | | | | | | | | | |
| | Re-Activate Well 2 - Design | \$ 426,500 | \$ 30,000 | | | | | | | | | |
| | Re-Activate Well 2 - Construction | | \$ 780,000 | | | | | | | | | |
| | Well 18 (Sycamore House) - Design | | | | \$ 120,000 | | | | | | | |
| | Well 18 (Sycamore House) - Construction | | | | | \$ 900,000 | | | | | | |
| | Well 19 - Design | | | | | | | \$ 120,000 | | | | |
| | Well 19 - Construction | | | | | | | | \$ 1,100,000 | | | |
| iii. Studies | | | | | | | | | | | | |
| | Update Water Well Replacement Study | | | | | \$ 100,000 | | | | | | |
| | Pilot Hole Study | | | | | | | \$ 200,000 | | | | |
| B. Imported Water | | | | | | | | | | | | |
| | CVWD/LADWP Inter. at Ordunio (Grant - Matching Funds) | \$ (112,700) | | | | | | | | | | |
| | Ocean View Chlorination St (Grant - Matching Funds) | \$ 121,700 | | | | | | | | | | |
| | Ocean View - Equip. & Elect (Grant - Matching Funds) | \$ 58,200 | | | | | | | | | | |
| C. Groundwater Basin Recharge | | | | | | | | | | | | |
| | Storm Water Recharge Study (Grant - Matching Funds) | \$ 18,700 | | | | | | | | | | |
| | Stormwater Recharge Project - Design | | \$ 150,000 | | | | | | | | | |
| | Stormwater Recharge Project - Construction | | | \$ 500,000 | \$ 500,000 | | | | | | | |
| D. Recycled Water System | | | | | | | | | | | | |
| i. Recycled Water | | | | | | | | | | | | |
| ii. Membrane Bioreactor Technology | | | | | | | | | | | | |
| WS Total | | \$ 1,012,300 | \$ 1,130,000 | \$ 650,000 | \$ 745,000 | \$ 1,025,000 | \$ 250,000 | \$ 350,000 | \$ 270,000 | \$ 1,250,000 | \$ 150,000 | \$ 150,000 |

| Capital Improvement Project Program 10-year CIP Budget | Projected FY 15/16 | Budget FY 16/17 | Forecast FY 17/18 | Forecast FY 18/19 | Forecast FY 19/20 | Forecast FY 20/21 | Forecast FY 21/22 | Forecast FY 22/23 | Forecast FY 23/24 | Forecast FY 24/25 | Forecast FY 25/26 |
|---|-----------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 2. Water Storage | | | | | | | | | | | |
| A. Reservoir Rehabilitation | | | | | | | | | | | |
| i. Roof/Vents Rehabilitation | | | | | | | | | | | |
| <i>Oak Creek #1 - Roof/Air Vents/Recoat</i> | | \$ 350,000 | | | | | | | | | |
| <i>Oak Creek #2 - Roof/Air Vents/Recoat</i> | | | \$ 350,000 | | | | | | | | |
| <i>Rosemont - Roof/Air Vents</i> | | | | \$ 250,000 | | | | | | | |
| <i>Markridge - Air Vents</i> | | | | | \$ 125,000 | | | | | | |
| <i>Goss Canyon #1 & #2 - Roof/Air Vents</i> | | | | | | \$ 250,000 | | | | | |
| ii. Steel Reservoir Re-Coating | | | | | | | | | | | |
| <i>Ordunio Reservoir - Recoating - Design</i> | | | | | | | \$ 25,000 | | | | |
| <i>Ordunio Reservoir - Recoating - Construction</i> | | | | | | | | \$ 365,000 | | | |
| <i>Edmund #2 Reservoir - Recoating - Design</i> | | | | | | | | \$ 25,000 | | | |
| <i>Edmund #2 Reservoir - Recoating - Construction</i> | | | | | | | | | \$ 350,000 | | |
| <i>Cresta Hts #1 & 2 Reservoir - Recoating - Design</i> | | | | | | | | | \$ 25,000 | | |
| <i>Cresta Hts #1 & 2 Reservoir - Recoating - Construction</i> | | | | | | | | | | \$ 550,000 | \$ 550,000 |
| iii. Concrete Reservoir Rehabilitation | | | | | | | | | | | |
| <i>Encinal Reservoir - Concrete Rehabilitation</i> | | | | \$ 100,000 | | | | | | | |
| iv. Corrosion Protection | | | | | | | | | | | |
| <i>Cathodic Protection Inspection & Replacement</i> | | | \$ 110,000 | | | | | | | | |
| v. Overflow & Drain System Upgrade | | | | | | | | | | | |
| <i>Upgrade Overflow/Drain System - Design</i> | | \$ 45,000 | | | | | | | | | |
| <i>Ocean View Reservoir - Overflow/Drain - Construction</i> | | \$ 450,000 | | | | | | | | | |
| B. Reservoir Water Quality | | | | | | | | | | | |
| i. Water Mixing System | | | | | | | | | | | |
| <i>Reservoir Water Quality & Mixing System Study</i> | | | | | | \$ 75,000 | | | | | |
| <i>Water Quality Mixing System - Design</i> | | | | | | | \$ 75,000 | | | | |
| <i>Water Quality Mixing System - Construction</i> | | | | | | | | \$ 150,000 | | \$ 150,000 | \$ 150,000 |
| iv. Replace common inlet and outlet piping | | | | | | | | | | | |
| C. New Reservoir Water Storage | | | | | | | | | | | |
| <i>Ocean View Reservoir (Top of Ocean View)</i> | | | | | | | | | | | |
| WS Total | \$ - | \$ 845,000 | \$ 460,000 | \$ 350,000 | \$ 125,000 | \$ 325,000 | \$ 100,000 | \$ 540,000 | \$ 375,000 | \$ 700,000 | \$ 700,000 |

| Capital Improvement Project Program 10-year CIP Budget | Projected FY 15/16 | Budget FY 16/17 | Forecast FY 17/18 | Forecast FY 18/19 | Forecast FY 19/20 | Forecast FY 20/21 | Forecast FY 21/22 | Forecast FY 22/23 | Forecast FY 23/24 | Forecast FY 24/25 | Forecast FY 25/26 |
|---|-----------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 3. Water Distribution | | | | | | | | | | | |
| A. Pipeline Replacement | | | | | | | | | | | |
| 2600 Block - Harmony Place - 450 LF | \$ 125,900 | | | | | | | | | | |
| 3900 Block - Park Place - 450 LF | \$ 125,900 | | | | | | | | | | |
| 3900 Block - Glenwood - 650 LF | \$ 218,200 | | | | | | | | | | |
| 2800 Block - Prospect & 4400 Block - Glenwood - 800 LF | \$ 57,400 | | | | | | | | | | |
| Lower Pickens Canyon Crossing & Slope - 600 LF | \$ 125,000 | \$ 500,000 | | | | | | | | | |
| Annual Pipeline Replacement - 2,000 LF | | \$ 500,000 | | | | | | | | | |
| Annual Pipeline Replacement - 4,000 LF | | | \$ 1,000,000 | | | | | | | | |
| Annual Pipeline Replacement - 4,000 LF | | | | \$ 1,000,000 | | | | | | | |
| Annual Pipeline Replacement - 4,000 LF | | | | | \$ 1,000,000 | | | | | | |
| Annual Pipeline Replacement - 4,000 LF | | | | | | \$ 1,200,000 | \$ 1,200,000 | \$ 1,200,000 | \$ 1,300,000 | \$ 1,500,000 | \$ 1,500,000 |
| B. New Pipelines | | | | | | | | | | | |
| C. Booster Pump System | | | | | | | | | | | |
| i. Annual Pump /Motor Replacement | | | | | | | | | | | |
| 1 - Booster | \$ - | | | | | | | | | | |
| 1 - Booster | | \$ 35,000 | | | | | | | | | |
| Annual Booster Replacement - 2 Boosters | | | \$ 70,000 | \$ 70,000 | \$ 75,000 | \$ 75,000 | \$ 80,000 | \$ 85,000 | \$ 90,000 | \$ 95,000 | \$ 95,000 |
| ii. Pump Station Upgrade | | | | | | | | | | | |
| Upgrade - Paschall Booster Station inlet piping & valves | | \$ 75,000 | \$ 500,000 | | | | | | | | |
| New Booster Pump Station- Goss Canyon | | | | \$ 75,000 | \$ 500,000 | | | | | | |
| New Booster Pump Station - Cresta Heights | | | | | \$ 75,000 | \$ 500,000 | | | | | |
| New Booster Pump Station | | | | | | \$ 125,000 | \$ 600,000 | \$ 125,000 | \$ 600,000 | \$ 125,000 | \$ 125,000 |
| iii. VFD Pump Upgrade | | | | | | | | | | | |
| iv. MCC Replacement | | | | | | | | | | | |
| MCC upgrade at Oak Creek | \$ 99,400 | | | | | | | | | | |
| MCC upgrade at Paschall | | \$ 75,000 | \$ 200,000 | | | | | | | | |
| MCC upgrade at Goss Canyon | | | | \$ 75,000 | \$ 200,000 | | | | | | |
| MCC upgrade at Cresta Heights | | | | | \$ 75,000 | \$ 200,000 | | | | | |
| MCC upgrade at Ocean View | | | | | | \$ 100,000 | \$ 200,000 | | | | |
| MCC upgrade at Edmund #2 | | | | | | | \$ 100,000 | \$ 200,000 | | | |
| MCC upgrade at Mills Plant | | | | | | | | \$ 100,000 | \$ 200,000 | | |
| MCC upgrade at Encinal | | | | | | | | | \$ 100,000 | \$ 300,000 | \$ 300,000 |
| D. Pressure Reducing Stations | | | | | | | | | | | |
| Upgrade PRS - Zone 4 to Zone 3 | | \$ 45,000 | | | | | | | | | |
| PRS - Zone 9 to Zone 6 | | | \$ 125,000 | | | | | | | | |
| PRS - Zone 10 to Zone 9 | | | | \$ 125,000 | | | | | | | |
| PRS - Zone 5 to Zone 4 | | | | | \$ 125,000 | | | | | | |
| PRS - Zone 8 to Zone 6 | | | | | | \$ 125,000 | | | | | |
| PRS - Zone 8 to Zone 6 | | | | | | | \$ 125,000 | | | | |
| Annual PRS Installation | | | | | | | | \$ 125,000 | \$ 125,000 | \$ 125,000 | \$ 125,000 |
| E. Miscellaneous Projects | | | | | | | | | | | |

| Capital Improvement Project Program 10-year CIP Budget | Projected FY 15/16 | Budget FY 16/17 | Forecast FY 17/18 | Forecast FY 18/19 | Forecast FY 19/20 | Forecast FY 20/21 | Forecast FY 21/22 | Forecast FY 22/23 | Forecast FY 23/24 | Forecast FY 24/25 | Forecast FY 25/26 |
|---|-----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| i. Water Surge Control | | | | | | | | | | | |
| <i>Rehabilitation Surge Tank at Glenwood</i> | \$ - | \$ 65,000 | | | | | | | | | |
| <i>Rehabilitation Surge Tank at Paschall</i> | | | \$ 75,000 | | | | | | | | |
| <i>Surge Analysis Study</i> | | | | | | \$ 125,000 | | | | | |
| ii. Street/Utility/ Meter Adjustment & Upgrade | | | | | | | | | | | |
| iii. Misc. | | | | | | | | | | | |
| <i>Repairs to Ramsdell Mixing Station</i> | | \$ 35,000 | | | | | | | | | |
| WD Total | \$ 751,800 | \$ 1,330,000 | \$ 1,970,000 | \$ 1,345,000 | \$ 2,050,000 | \$ 2,450,000 | \$ 2,305,000 | \$ 1,835,000 | \$ 2,415,000 | \$ 2,145,000 | \$ 2,145,000 |
| 4. Water Treatment | | | | | | | | | | | |
| A. Nitrate Removal | | | | | | | | | | | |
| i. Glenwood | | | | | | | | | | | |
| <i>Replace Ion Exchange Resin at Glenwood</i> | | | | | | | \$ 400,000 | | | | |
| ii. Mills | | | | | | | | | | | |
| <i>Ion Exchange Plant at Mills - Design</i> | | | | | | \$ 135,000 | | | | | |
| <i>Ion Exchange Plant at Mills - Construction</i> | | | | | | | \$ 1,000,000 | | | | |
| B. Chlorine Disinfection | | | | | | | | | | | |
| <i>New Chlorination Station at Markridge Reservoir</i> | | | \$ 75,000 | | | | | | | | |
| <i>New Chlorine Analyzers at Various Sites</i> | | | | | \$ 75,000 | | \$ 75,000 | \$ 75,000 | \$ 75,000 | | |
| C. Convert to Chloramines | | | | | | | | | | | |
| D. New Federal and State Regulations | | | | | | | | | | | |
| E. Water Quality Studies | | | | | | | | | | | |
| F. MTBE Removal | | | | | | | | | | | |
| WT Total | \$ - | \$ - | \$ 75,000 | \$ - | \$ 75,000 | \$ 135,000 | \$ 1,475,000 | \$ 75,000 | \$ 75,000 | \$ - | \$ - |
| 5. Technology | | | | | | | | | | | |
| A. Automated Meter Information (AMI) System | | | | | | | | | | | |
| <i>Conversion of 3/4" & 1" meter</i> | | \$ 240,000 | \$ 240,000 | \$ 240,000 | | | | | | | |
| <i>Conversion of Large Meters & Fire Services</i> | | \$ 135,000 | \$ 135,000 | \$ 135,000 | | | | | | | |
| <i>Install & Integration of AMR & Fix Area Network</i> | | | \$ 385,000 | \$ 385,000 | | | | | | | |
| B. Supervisory Control and Data Acquisition (SCADA) System | | | | | | | | | | | |
| <i>SCADA RTU Replacement (35 sites) - Design</i> | \$ - | | | | | | | | | | |
| <i>SCADA RTU Replace - Equipment & Integration</i> | \$ 56,000 | \$ 400,000 | \$ 300,000 | \$ 200,000 | | | | | | | |
| C. Graphical Information System (GIS) | | | | | | | | | | | |
| TECH Total | \$ 56,000 | \$ 775,000 | \$ 1,060,000 | \$ 960,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |

| Capital Improvement Project Program 10-year CIP Budget | Projected FY 15/16 | Budget FY 16/17 | Forecast FY 17/18 | Forecast FY 18/19 | Forecast FY 19/20 | Forecast FY 20/21 | Forecast FY 21/22 | Forecast FY 22/23 | Forecast FY 23/24 | Forecast FY 24/25 | Forecast FY 25/26 |
|---|-----------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 6. Public Safety/Emergency Response | | | | | | | | | | | |
| A. Emergency Electrical Generators | | | | | | | | | | | |
| B. Water Storage | | | | | | | | | | | |
| <i>Seismic Sensors & Valve Actuators - Duns/Pickens</i> | \$ - | \$ 75,000 | | | | | | | | | |
| <i>Seismic Sensors & Valve Actuators - Ordunio</i> | | | \$ 80,000 | | | | | | | | |
| <i>Seismic Sensors & Valve Actuators - Oak Creek</i> | | | | \$ 150,000 | | | | | | | |
| C. Security | | | | | | | | | | | |
| D. Miscellaneous | | | | | | | | | | | |
| SF/ER Total | \$ - | \$ 75,000 | \$ 80,000 | \$ 150,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 7. Facilities & Planning | | | | | | | | | | | |
| A. Main Office | | | | | | | | | | | |
| <i>Expansion with New Roof wiith Solar Panels</i> | | | | | | | | | | | |
| <i>Building Seismic Analysis Study</i> | | | | | | | | | | | |
| B. Glenwood Plant | | | | | | | | | | | |
| <i>Expansion of Electrical/SCADA Equipment Bldg.</i> | | | | | | \$ 50,000 | | | | | |
| C. Mills Plant | | | | | | | | | | | |
| D. Reservoir Site Improvements | | | | | | | | | | | |
| <i>Roof Replacement at Old Encinal</i> | | | | | | \$ 115,000 | | | | | |
| <i>Pickens - Access Road Improvements</i> | | | | | | \$ 70,000 | \$ 250,000 | \$ 250,000 | | | |
| <i>Edmund #2 - Lower Access Road Improvements</i> | | | | | | | \$ 80,000 | \$ 350,000 | | | |
| <i>Edmund #2 - Upper Access Road Improvements</i> | | | | | | | | | \$ 350,000 | | |
| <i>Cresta Heights - Site Improvements</i> | | | | | | | | | \$ 90,000 | | |
| <i>Rosemont - Site Improvements</i> | | | | | | | | | | \$ 125,000 | \$ 125,000 |
| <i>Shields - Access Road Improvements</i> | | | | | | | | | | \$ 100,000 | \$ 100,000 |
| 5. Misc. Properties | | | | | | | | | | | |
| 6. District Planning | | | | | | | | | | | |
| <i>Strategic Planning</i> | | | | | | | | | | | |
| <i>Asset Management Study</i> | | | | | | | | | | | |
| F & P Total | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 235,000 | \$ 330,000 | \$ 600,000 | \$ 440,000 | \$ 225,000 | \$ 225,000 |
| Capital Improvement Projects - Total | \$ 1,820,100 | \$ 4,155,000 | \$ 4,295,000 | \$ 3,550,000 | \$ 3,275,000 | \$ 3,395,000 | \$ 4,560,000 | \$ 3,320,000 | \$ 4,555,000 | \$ 3,220,000 | \$ 3,220,000 |
| | | | | | | | | | | | |
| Budget Amount in Cashflow Model | \$ 2,000,000 | \$ 2,000,000 | \$ 2,000,000 | \$ 2,500,000 | \$ 2,500,000 | \$ 2,500,000 | \$ 2,500,000 | \$ 2,500,000 | \$ 2,500,000 | \$ 2,500,000 | \$ 2,500,000 |
| Amount over/under Budget | \$ (179,900) | \$ 2,155,000 | \$ 2,295,000 | \$ 1,050,000 | \$ 775,000 | \$ 895,000 | \$ 2,060,000 | \$ 820,000 | \$ 2,055,000 | \$ 720,000 | \$ 720,000 |