

Santa Ana River - Mill Creek Cooperative Water Project

Daily Flow Report Summary

Date: 7/13/2018

Time: 6:40:00 AM

| Santa Ana River | | Flow Rate (cfs) |
|-----------------|-----------------------------|-----------------|
| A5 | Total SAR Inflows | 15.3 |
| N2 | Total SAR Deliveries | 15.3 |
| A1 | SAR PH#3 Penstock (calc) | 12.6 |
| B1 | BVMWC Highline | 1.3 |
| C1 | Greenspot Pipeline | 0.0 |
| L2 | SBVWCD Parshall Flume | 11.5 |
| G2 | North Fork Canal Weir | 1.3 |
| H2 | Edwards Canal | 0.9 |
| W1 | Redlands Aqueduct (calc) | 0.3 |
| | Other | 0.0 |

| Mill Creek | | Flow Rate (cfs) |
|------------|----------------------------|-----------------|
| D3 | Total MC Inflows | 12.0 |
| U3 | Total MC Deliveries | 12.0 |
| K3 | Yucaipa Pipeline | 0.0 |
| O3 | SBVWCD Spreading | 12.0 |
| T3 | MC #1 Flow (Cooley Hat) | 0.0 |

| State Water Project | | Flow Rate (cfs) |
|---------------------|-----------------------------|-----------------|
| G | Total SWP Inflows | 33.9 |
| V | Total SWP Deliveries | 33.9 |
| J | Northfork Canal | 5.9 |
| L | Redlands Aqueduct | 9.9 |
| M | Crafton Unger Lane | 6.2 |
| T | Newport to BVMWC | 0.6 |

| Reservoir Levels | Feet |
|--------------------------------|------|
| Observation at SOD | N/A |
| Crafton Reservoir Level (21.3) | 13.6 |
| Mentone Reservoir Level | 17.8 |

| River Recharge | AF |
|-------------------------------------|----|
| Estimate SAR Recharge (AF) | 0 |
| Estimate Mill Creek Recharge (AF) | 12 |
| Estimated Total River Recharge (AF) | 12 |

| Location | Type | WY to Date (AF) | Target |
|-------------------------------|--------|-----------------|---------|
| Santa Ana River | SAR | 2,421 | 166,000 |
| Santa Ana River to Mill Creek | SAR-MC | 115 | 0 |
| Santa Ana River | SWP | 6,502 | 0 |
| Mill Creek | MC | 1,553 | 99,700 |
| Mill Creek | SWP | 1,627 | 0 |
| Redlands | SWP | 0 | 0 |
| Loma Linda | SWP | 0 | 0 |
| East Valley | SWP | 170 | 0 |

Notes: Numbers on the Daily Flow Report are a snapshot of water at a given location at the time of the read, normally very early in the morning, and not necessarily what is at that location thruout the day.

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Daily Flow Report

Date: 7/13/2018
Time: 6:40:00 AM

State Water Project

| Inflows | | | Deliveries | | | | | | | | |
|---------|--------------------------------|-------------|------------|-----------------------|-----|---|----------------------|-----|---|-----------------------------|-------------|
| A | BBMWD In-lieu | 21.8 | H | EVWDC City Creek | 0.0 | M | Crafton Unger Lane | 6.2 | S | SBCFCD Grove | 0.0 |
| B | Muni test at Greenspot Station | 0.0 | I | Santa Ana Low Turnout | 7.3 | N | BVMWC Boullioun Box | 4.0 | T | Newport for BVMWC | 0.6 |
| C | Exchange Water | 0.0 | J | Northfork Canal | 5.9 | P | SARC West | 0.0 | U | M/C spreading at Zanja Tate | 0.0 |
| D | Purchased Water | 12.1 | K | Edwards Canal | 0.0 | Q | Zanja | 0.0 | W | Tres Lagos | 0.0 |
| E | Redlands Aqueduct Leakage | 0.0 | L | Redlands Aqueduct | 9.9 | R | Tate Treatment Plant | 0.0 | V | Total SWP Deliveries | 33.9 |
| F | Recharge Project | 0.0 | | | | | | | | | |
| G | Total SWP Inflows | 33.9 | | | | | | | | | |

Santa Ana River Inflows

| SAR PH #3 Penstock (calc) | | | BVMWC Highline | | | SOD Release Subtotal | | | Total SAR Inflows | | |
|---------------------------|----------------------------------|-------------|----------------|-------------------------------|------------|----------------------|---------------------------------|------------|---------------------|-------------------------------------|--------------------------|
| G2 | Northfork Canal Weir | 1.3 | A2 | Newport | 0.0 | D1 | BVMWC River PU (USGS) | 1.4 | A1 | SAR PH #3 Penstock (calc) | 12.6 |
| H2 | Edwards Canal | 0.9 | D2 | Boullioun Box Weir | 1.3 | E1 | Main River Gage (USGS) | 0.0 | B1 | BVMWC Highline | 1.3 |
| J2 | Tailrace Valve to Parshall Flume | 6.9 | E2 | Boullioun Box to Zanja | 0.0 | minus | | | C1 | Greenspot Pipeline | 0.0 |
| K2 | Northfork Parshall Flume | 4.6 | F2 | SBVWCD Mill Creek Spreading | 0.0 | F1 | Greenspot Spill | 0.0 | D1 | BVMWC River PU (USGS) | 1.4 |
| V1 | PH#3 Afterbay SpillLoss to SAR | 0.0 | B1 | BVMWC Highline | 1.3 | Z1 | SOD Release Subtotal | 1.4 | E1 | Main River Gage (USGS) | 0.0 |
| W1 | Redlands Aqueduct / Sandbox | 0.5 | | | | | | | D1a | BV Pick-Up gated | <input type="checkbox"/> |
| Y1 | Redlands Sandbox Spill | 0.1 | | | | | | | A5 | Total SAR Inflows | 15.3 |
| minus | | | Other | | | | | | Edison Generation | | |
| D1 | BVMWC River PU (USGS) | 1.4 | J1 | Big Bear Lake Release | 1.0 | w | Observation at SOD | N/A | SAR PH#1 Generating | <input type="checkbox"/> | |
| I1 | Redlands Tunnel | 0.3 | L1 | SCE SAR AVM (SCADA) | 15.2 | x | SOD Reservoir Elevation (scada) | 2151.3 | SAR PH#3 Generating | <input checked="" type="checkbox"/> | |
| A1 | SAR PH #3 Penstock (calc) | 12.6 | X1 | SAR-MC Spread (Red. Aqueduct) | 0.0 | y | Debris Pool Elevation | N/A | | | |
| K1 | PH#3 Penstock (SCADA) | 12.6 | | | | | | | | | |

Santa Ana River Deliveries

| Greenspot Pipeline | | | Tailrace Pipeline | | | SBVWCD Parshall Flume To Basins | | | Deliveries | | |
|--------------------|-----------------------------|------------|-------------------|----------------------------------|-------------|---------------------------------|----------------------------------|-------------|------------|----------------------------------|-------------|
| M1 | SBCFCD Grove | 0.0 | G2 | Northfork Canal Weir | 1.3 | J2 | Tailrace Valve to Parshall Flume | 6.9 | V1 | SAR PH #3 Afterbay Spill | 0.0 |
| N1 | BVMWC Highline | 0.0 | H2 | Edwards Canal | 0.9 | K2 | Northfork Parshall Flume | 4.6 | W1 | Redlands Aqueduct / Sandbox | 0.5 |
| O1 | Newport for BVMWC | 0.0 | J2 | Tailrace Valve to Parshall Flume | 6.9 | H1 | SBVWCD Diversion | 0.0 | Y1 | Redlands Sandbox Spill | 0.1 |
| P1 | SBVWCD Mill Creek Spreading | 0.0 | K2 | Northfork Parshall Flume | 4.6 | L2 | SBVWCD Parshall Flume | 11.5 | Z2 | Cuttle Weir To River | 0.0 |
| Q1 | Crafton WC Unger Lane | 0.0 | I2 | Tailrace Pipeline | 13.7 | | Parshall Flume (SCADA) | 10.3 | B1 | BVMWC Highline | 1.3 |
| R1 | BVMWC Highline to Boullioun | 0.0 | | | | | | | C1 | Greenspot Pipeline | 0.0 |
| S1 | Crafton WC Boullioun | 0.0 | | | | | | | I2 | Tailrace Pipeline | 13.7 |
| T1 | Tate Pump Station to Zanja | 0.0 | | | | | | | L2 | SBVWCD Parshall Flume | 11.5 |
| C1 | Greenspot Pipeline | 0.0 | | | | | | | minus | | |
| | | | | | | | | | J2 | Tailrace Valve to Parshall Flume | 6.9 |
| | | | | | | | | | K2 | Northfork Parshall Flume | 4.6 |
| | | | | | | | | | I1 | Redlands Tunnel | 0.3 |
| | | | | | | | | | N2 | Total SAR Deliveries | 15.3 |

Mill Creek Inflows

| Total MC Inflows | | | Other | | |
|------------------|-----------------------------|-------------|-------|----------------------------------|-----|
| A3 | RPU Flow | 0.0 | E3 | M/C #1 Penstock Flow | 0.0 |
| B3 | M/C #3 Penstock | 0.0 | F3 | Stream Parshall Flume to Yucaipa | 0.0 |
| C3 | SBVWCD Mill Creek Diversion | 12.0 | G3 | Observation at Garnet | 0.0 |
| D3 | Total MC Inflows | 12.0 | | | |

Mill Creek Deliveries

| Yucaipa Pipeline | | | MC #1 Flow (Cooley Hat) | | | Total MC Deliveries | | | Other | | |
|------------------|-------------------------|------------|-------------------------|--------------------------------|------------|---------------------|---------------------------------|-------------|-------|-----------------------------------|------|
| I3 | Yucaipa Regional Park | 0.0 | P3 | Tate Inflow | 0.0 | C3 | SBVWCD Mill Creek Diversion | 12.0 | H3 | Mentone Reservoir Level | 17.8 |
| J3 | Wilson Creek Spreading | 0.0 | Q3 | East Weir to Mill Creek | 0.0 | T3 | Mill Creek #1 Flow (Cooley Hat) | 0.0 | R3 | Boullioun to BVMWC Highline | 0.0 |
| K3 | Yucaipa Pipeline | 0.0 | S3 | East Weir to Zanja | 0.0 | U3 | Total MC Deliveries | 12.0 | V3 | Zanja West Weir to CWC Canal | 4.5 |
| | | | T3 | MC #1 Flow (Cooley Hat) | 0.0 | | | | W3 | Mill Creek PH #2,3 Afterbay Spill | 0.0 |
| | | | N3 | Cooley Hat (SCADA) | 0.0 | | | | Y3 | Crafton Reservoir Level (21.3) | 13.6 |

SBVWCD Recharge

| Location | Type | Previous Day (AF) | | WY To Date (AF) | | Target | Calendar Year To Date (AF) | | Target |
|---------------------------------|-----------------------------|-------------------------------|------|--------------------------------|---------|---------|-----------------------------------|---------|---------|
| A4 | Santa Ana River | E4 | 24.5 | I4 | 2,421.2 | 166,000 | I4 | 2,421.2 | 166,000 |
| M4 | Santa Ana Rvr to Mill Creek | N4 | 0.0 | O4 | 114.6 | | O4 | 88.3 | |
| B4 | Santa Ana River | F4 | 0.0 | J4 | 6,502.3 | | J4 | 100.9 | |
| C4 | Mill Creek | G4 | 28.7 | K4 | 1,553.1 | 99,700 | K4 | 1,339.7 | 99,700 |
| D4 | Mill Creek | H4 | 0.0 | L4 | 1,627.4 | | L4 | 434.1 | |
| | Redlands | | 0.0 | | 0.0 | | | 0.0 | |
| | Loma Linda | | 0.0 | | 0.0 | | | 0.0 | |
| | East Valley | | 14.3 | | 170.0 | | | 170.0 | |
| SAR Passing Cuttle Weir (cfs) | 0 | Share of Lost SAR Flow | 0 | Estimate SAR flow (cfs) | 0 | | Estimate SAR Recharge (AF) | 0 | |
| Mill Creek Passing Garnet (cfs) | 0 | Share of Lost Mill Creek Flow | 0 | Estimate Mill Creek flow (cfs) | 0 | | Estimate Mill Creek Recharge (AF) | 12 | |
| Flow in the River Above Alabama | 0 | Flowing Beyond Alabama | 0 | Total River Flow (cfs) | 0 | | Total River Recharge (AF) | 12 | |

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Santa Ana Stations

