Buckman Direct Diversion
A joint regional project of the City of Santa Fe and Santa Fe County to build a reliable and sustainable water supply.

## Memorandum

## Date: April 28, 2015

To: Buckman Direct Diversion Board
From: Charles Vokes, BDD Facilities Manager $C \downarrow$
Subject: Update on the Diversion Structure Inspection and Repairs

## ITEM AND ISSUE:

Progress report on the Inspection and Repair of the BDD Diversion Structure

## BACKGROUND AND SUMMARY:

On Friday April 3, the BDD cofferdam was completed and water production at the BDD ceased. The BDD dedicated the stored finished water to Santa Fe County and was able to continue pumping to the County until Tuesday morning, April $7^{\text {th }}$. The following table outlines the events that took place during the inspection and repair process.

| Date | Activity |
| :--- | :--- |
| April 6, 2015 | BDD staff pumped the water from behind the cofferdam to expose <br> the diversion structure. Initial inspection and documentation <br> (photos) began. |
| April 7, 2015 | Inspection was performed by the BDD staff and the engineering <br> firms of CDM, CH2MHill, HDR and Deere and Ault. Screens and <br> air frames were pulled to allow inspection inside the cells. |
| April 7, 2015 | BDD staff and the engineering firms met in the BDD conference <br> room to compare observations and create a repair plan for the <br> structure. |
| April 8-24, 2015 | BDD staff along with members of the City of Santa Fe began <br> repairs and modifications of the diversion structure. |
| April 18,2014 | Painting contractor onsite to paint the diversion frames with epoxy <br> paint to slow down the corrosion caused by dissimilar metals in the <br> structure. |



[^0]| April 20-27, 2015 | Staff of Deere and Ault are onsite to install sand burst system and <br> assist BDD staff with the diversion structure repairs. |
| :--- | :--- |
| April 24, 2015 | BDD staff discovered damage to floor burst systems and damage <br> to the concrete within the diversion cells. |
| April 24-28, 2015 | BDD staff will complete repairs to the air frames, screens and <br> hoses and make temporary repairs to the concrete within the cells <br> in preparation for an April 30, 2015 startup. |
| April 30,2015 | ASI removes sections of cofferdam for BDD startup. |

At this point, the final totals for man-hours and materials costs have not been completed. Because of the extensive damage caused by the air burst system, discussions will begin immediately to determine the solutions for these issues. The goal will be to have the solutions and materials in place so that the eventual repair of the structure can be completed during the fall of 2015.

The BDD staff, CDM Smith, CH2M Hill and the design-build team, and Deere and Ault will all be issuing independent reports on their observations and solutions to the BDD Diversion Structure issues before May 15, 2015.

A joint regional project of the City of Santa Fe and Santa Fe County to build a reliable and sustainable water supply.

# Memorandum 

## Date: April 23, 2015

| To: | Buckman Direct Diversion Board |
| :--- | :--- |
| From: | Michael Dozier, Interim Operations Superintendent |

Subject: Update on BDD Operations for the month of April 2015

## ITEM:

1. This memorandum is to update the Buckman Direct Diversion (BDD) Board on BDD operations during the month of April 2015. BDD is currently undergoing maintenance of the diversion. No water has been diverted after the second day of the month. 9.82 million gallons were diverted on the first and second day of the month of April. The release of treated water from BDD storage was stopped on the sixth of April.
2. Please see the following pages from the Monthly report to the Office of the State Engineer (OSE) for accurate information up to April 23, 2015.
3. Please note all prior years are also included for reference.


## BACKGROUND AND SUMMARY:

Buckman Direct Diversion Monthly SJC and Native Diversions
Apr-15
$\left.\begin{array}{|c|c|c|c|c|c|c|c|}\hline \text { Month } & \begin{array}{c}\text { Total } \\ \text { SJC }+ \\ \text { Native } \\ \text { Rights }\end{array} & \begin{array}{c}\text { SP-4842 } \\ \text { RG } \\ \text { Native } \\ \text { COUNTY }\end{array} & \begin{array}{c}\text { SD-03638 } \\ \text { RG Native } \\ \text { LAS }\end{array} & \begin{array}{c}\text { CAMPANAS }\end{array} & \begin{array}{c}\text { SP-2847-E } \\ \text { SJC Call } \\ \text { Total }\end{array} & \begin{array}{c}\text { SP-2847-N-A Call } \\ \text { CITY }\end{array} & \begin{array}{c}\text { SJC Call } \\ \text { LAS } \\ \text { CAMPANAS }\end{array} \\ \hline \text { JAN } & \mathbf{3 1 2 . 3 4} & \mathbf{6 6 . 1 2} & \mathbf{0 . 0 0} & 246.21 & \mathbf{2 4 6 . 2 1} & \mathbf{0 . 0 0} & 2.27 \\ \hline \text { Conveyance } \\ \text { Losses }\end{array}\right]$

In Acre-Feet

| Month | Native <br> COUNTY | Native <br> Las <br> Campanas | SJC <br> CITY | SJC <br> Las <br> Canpanas | All Partners <br> Diversions <br> BDDD |
| :---: | :---: | :---: | :---: | :---: | :---: |
| JAN | 66.12 | 0.00 | 243.94 | 0.00 | 310.06 |
| FEB | 49.88 | 6.85 | 268.93 | 0.00 | 325.66 |
| MAR | 169.87 | 8.15 | 178.06 | 0.00 | 356.07 |
| APR | 30.55 | 0.00 | 0.00 | 0.00 | 30.55 |
| MAY | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| JUN | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| JUL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AUG | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SEP | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OCT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NOV | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| DEC | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| TOTAL | $\mathbf{3 1 6 . 4 2}$ | $\mathbf{1 5 . 0 0}$ | $\mathbf{6 9 0 . 9 3}$ | $\mathbf{0 . 0 0}$ | $\mathbf{1 , 0 2 2 . 3 4}$ |

## Buckman Direct Diversion Monthly SJC and Native Diversions

|  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month | Total SJC <br> Release (AF) | SJC Conveyanc e Losses (AF) | Total SJC <br> Available at BDD (AF) | SJC <br> Diversion, SP-2847-E (AF) | SJC <br> Diversion, $\begin{gathered} \text { SP-2847-N- } \\ \text { A (AF) } \end{gathered}$ | Total <br> Native Rio Grande Diversion SP-4842 <br> (AF) | Release of SJC in Elephant Butte (AF) | Total BDD <br> Surface <br> Diversion <br> (all permits) | SJC from SP-2847-E used to offset Buckman Wells RG- 20516 (AF) | SJC from SP-2847-N used to offset Buckman Wells RG- 20516 (AF) |
| JAN | 383.35 | 3.74 | 390.34 | 390.34 | 0.00 | 12.68 | 0 | 403.01 | 0 | 0 |
| FEB | 349.51 | 3.28 | 341.55 | 341.55 | 0.00 | 11.38 | 0 | 352.93 | 0 | 0 |
| MAR | 373.88 | 3.66 | 381.69 | 357.07 | 34.09 | 148.83 | 0 | 530.52 | 0 | 0 |
| APR | 178.75 | 1.70 | 176.78 | 92.46 | 84.47 | 227.22 | 0 | 404.00 | 0 | 0 |
| MAY | 491.46 | 4.61 | 480.35 | 389.13 | 91.22 | 374.86 | 0 | 855.21 | 0 | 0 |
| JUN | 427.50 | 3.96 | 412.65 | 295.07 | 117.58 | 292.84 | 0 | 705.49 | 0 | 0 |
| JUL | 425.22 | 4.14 | 431.96 | 399.51 | 32.46 | 72.32 | 0 | 504.28 | 0 | 0 |
| AUG | 496.68 | 4.60 | 479.66 | 479.66 | 0.00 | 96.07 | 0 | 575.74 | 0 | 0 |
| SEP | 552.71 | 5.40 | 562.83 | 562.83 | 0.00 | 84.85 | 0 | 647.68 | 0 | 0 |
| OCT | 381.93 | 3.63 | 378.30 | 378.30 | 0.00 | 142.46 | 0 | 520.76 | 0 | 0 |
| NOV | 441.14 | 4.09 | 426.17 | 426.17 | 0.00 | 11.59 | 0 | 437.76 | 0 | 0 |
| DEC | 423.99 | 4.13 | 430.74 | 430.74 | 0.00 | 19.56 | 0 | 450.30 | 0 | 0 |
| TOTAL | 4,926.12 | 46.93 | 4,893.03 | 4,542.84 | 359.82 | 1,494.66 | 0.00 | 6,387.69 | 0.00 | 0.00 |

Source of SJC releases in reporting month. Includes conveyance losses.

|  |  | ABIQUIU |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Month | Total <br> Release <br> (AF) | City of <br> Santa Fe <br> (AF) | Santa Fe <br> County <br> (AF) | Club at Las <br> Campanas <br> (AF) |
| JAN | 383.35 | 383.35 | 0.00 | 0.00 |
| FEB | 349.51 | 349.51 | 0.00 | 0.00 |
| MAR | 373.88 | 346.37 | 0.00 | 27.37 |
| APR | 178.75 | 93.42 | 0.00 | 85.41 |
| MAY | 491.46 | 399.41 | 0.00 | 92.41 |
| JUN | 427.50 | 307.54 | 0.00 | 120.28 |
| JUL | 425.22 | 397.13 | 0.00 | 28.09 |
| AUG | 496.68 | 496.68 | 0.00 | 0.00 |
| SEP | 552.71 | 552.71 | 0.00 | 0.00 |
| OCT | 381.93 | 381.93 | 0.00 | 0.00 |
| NOV | 441.14 | 441.14 | 0.00 | 0.00 |
| DEC | 423.99 | 423.99 | 0.00 | 0.00 |
| TOTAL | $4,926.12$ | $\mathbf{4 , 5 7 3 . 1 9}$ | 0.00 | 353.55 |

## Buckman Direct Diversion Monthly SJC and Native Diversions

December 2013

| Month | Total SJC Release (AF) | SJC Conveyanc e Losses (AF) | Total SJC <br> Available <br> at BDD <br> (AF) | SJC Diversion, SP-2847-E (AF) | SJC <br> Diversion, SP-2847-NA (AF) | Total Native Rio Grande Diversion SP-4842 (AF) | Release of SJC in Elephant Butte (AF) | Total BDD Surface Diversion (all permits) | SJC from <br> SP-2847-E <br> used to <br> offset <br> Buckman <br> Wells RG- <br> 20516 (AF) | SJC from <br> SP-2847-N <br> used to <br> offset <br> Buckman <br> Wells RG- <br> $20516(\mathrm{AF})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| JAN | 439.04 | 4.24 | 441.79 | 441.79 | 0 | 44.09 | 0 | 485.88 | 0 | 0 |
| FEB | 261.03 | 2.47 | 257.94 | 257.94 | 0 | 10.49 | 0 | 268.42 | 0 | 0 |
| MAR | 353.69 | 3.30 | 343.57 | 343.57 | 0 | 75.66 | 0 | 419.23 | 0 | 0 |
| APR | 680.73 | 6.34 | 661.33 | 661.33 | 0 | 89.47 | 0 | 750.80 | 0 | 0 |
| MAY | 1045.27 | 9.88 | 1030.46 | 1030.46 | 0 | 22.86 | 0 | 1053.32 | 0 | 0 |
| JUN | 817.91 | 7.85 | 818.00 | 734.56 | 83.44 | 260.03 | 0 | 1078.03 | 0 | 0 |
| JUL | 606.85 | 5.90 | 614.73 | 397.47 | 78.83 | 0.00 | 0 | 476.30 | 83.70 | 54.73 |
| AUG | 108.68 | 0.91 | 95.34 | 41.68 | 36.91 | 0.00 | 0 | 78.59 | 5.58 | 11.18 |
| SEP | 136.77 | 1.43 | 149.29 | 63.86 | 53.76 | 0.00 | 0 | 117.61 | 25.36 | 6.32 |
| OCT | 255.24 | 2.46 | 256.53 | 213.87 | 42.66 | 72.92 | 0 | 329.45 | 0 | 0 |
| NOV | 196.45 | 1.88 | 195.50 | 187.02 | 8.48 | 117.33 | 0 | 312.83 | 0 | 0 |
| DEC | 293.76 | 2.63 | 274.19 | 274.19 | 0.00 | 12.25 | 0 | 286.44 | 0 | 0 |
| TOTAL | 5195.42 | 49.29 | 5138.67 | 4647.73 | 304.07 | 705.09 | 0.00 | 5656.89 | 114.64 | 72.23 |

Source of SJC releases in reporting month. Includes conveyance losses.

|  |  | ABIQUIU |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Month | Total <br> Release <br> (AF) | City of <br> Santa Fe <br> (AF) | Santa Fe <br> County <br> (AF) | Club at Las <br> Campanas <br> (AF) |
| JAN | 439.04 | 439.04 | 0 | 0 |
| FEB | 261.03 | 261.03 | 0 | 0 |
| MAR | 353.69 | 353.69 | 0 | 0 |
| APR | 680.73 | 680.73 | 0 | 0 |
| MAY | 1045.27 | 1045.27 | 0 | 0 |
| JUN | 817.91 | 729.30 | 0 | 88.60 |
| JUL | 606.85 | 473.27 | 0 | 133.58 |
| AUG | 108.68 | 65.21 | 0 | 43.47 |
| SEP | 136.77 | 83.87 | 0 | 52.90 |
| OCT | 255.24 | 211.15 | 0 | 44.09 |
| NOV | 196.45 | 186.31 | 0 | 10.15 |
| DEC | 293.76 | 293.76 | 0 | 0.00 |
| TOTAL | 5195.42 | 4822.62 | 0.00 | 372.79 |

Buckman Direct Diversion Monthly SJC and Native Diversions
December 2012

| Month | Total SJC Release SP-2847-E (AF) | Conveyance Losses (AF) | Total SJC Available at BDD Diversion (AF) | Total SJC Diversion <br> SP-2847- <br> E (AF) | Total Native Rio Grande Diversion SP-4842 (AF) | Release of SJC in Elephant Butte (AF) | Total BDD <br> Surface <br> Diversion <br> SP-2847-E <br> plus SP- <br> 4842 (AF) | SJC used to offset Buckman Wells RG20516 (AF) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| JAN | 448.09 | 4.06 | 447.00 | 411.56 | 5.02 | 0 | 416.59 | 35.44 |
| FEB | 210.29 | 1.97 | 216.94 | 208.13 | 32.21 | 0 | 240.34 | 8.81 |
| MAR | 335.75 | 2.94 | 323.61 | 312.85 | 59.21 | 0 | 372.06 | 10.76 |
| APR | 528.63 | 4.72 | 519.90 | 519.90 | 108.61 | 0 | 628.51 | 0.00 |
| MAY | 660.18 | 6.24 | 651.05 | 651.05 | 145.51 | 0 | 796.55 | 0.00 |
| JUN | 722.36 | 6.79 | 692.21 | 692.21 | 120.92 | 0 | 813.12 | 0.00 |
| JUL | 152.03 | 2.23 | 191.75 | 157.16 | 0.00 | 0 | 157.16 | 34.60 |
| AUG | 86.08 | 0.58 | 60.90 | 60.90 | 239.96 | 0 | 300.87 | 0.00 |
| SEP | 637.17 | 6.05 | 630.92 | 630.92 | 110.07 | 0 | 740.99 | 0.00 |
| OCT | 747.21 | 7.14 | 744.87 | 744.87 | 50.82 | 0 | 795.69 | 0.00 |
| NOV | 479.19 | 4.63 | 482.65 | 482.65 | 120.91 | 0 | 603.56 | 0.00 |
| DEC | 442.67 | 4.17 | 434.71 | 434.71 | 119.44 | 0 | 554.15 | 0.00 |
| TOTALS | 5449.67 | 51.53 | 5396.51 | 5306.90 | 1112.67 | 0.00 | 6419.57 | 89.61 |

Source of SJC Releases in reporting month. Includes conveyance losses.

|  |  | HERON |  | EL VADO |  | ABIQUIU |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month | Total <br> Release <br> (AF) | CITY | COUNTY | CITY | COUNTY | CITY | COUNTY |
| JAN | 448.09 | 0.00 | 0.00 | 0.00 | 0.00 | 448.09 | 0.00 |
| FEB | 210.29 | 0.00 | 0.00 | 0.00 | 0.00 | 210.29 | 0.00 |
| MAR | 335.75 | 0.00 | 0.00 | 0.00 | 0.00 | 335.75 | 0.00 |
| APR | 528.63 | 0.00 | 0.00 | 0.00 | 0.00 | 528.63 | 0.00 |
| MAY | 660.18 | 0.00 | 0.00 | 0.00 | 0.00 | 660.18 | 0.00 |
| JUN | 722.36 | 0.00 | 27.21 | 0.00 | 0.00 | 695.15 | 0.00 |
| JUL | 152.03 | 0.00 | 21.42 | 0.00 | 0.00 | 130.61 | 0.00 |
| AUG | 86.08 | 0.00 | 0.00 | 0.00 | 0.00 | 86.08 | 0.00 |
| SEP | 637.17 | 0.00 | 0.00 | 0.00 | 0.00 | 637.17 | 0.00 |
| OCT | 747.21 | 0.00 | 0.00 | 0.00 | 0.00 | 747.21 | 0.00 |
| NOV | 479.19 | 0.00 | 0.00 | 0.00 | 0.00 | 479.19 | 0.00 |
| DEC | 442.67 | 0.00 | 0.00 | 0.00 | 0.00 | 442.67 | 0.00 |
| TOTALS | 5449.67 | $\mathbf{0 . 0 0}$ | $\mathbf{4 8 . 6 3}$ | $\mathbf{0 . 0 0}$ | $\mathbf{0 . 0 0}$ | $\mathbf{5 4 0 1 . 0 4}$ | $\mathbf{0 . 0 0}$ |

Note: Grey fields indicate revisions to previous monthly report

## MEMORANDUM

TO: City of Santa Fe Public Utilities Committee City of Santa Fe Water Conservation Committee Buckman Direct Diversion Board

FROM: Rick Carpenter, Water Resources and Conservation Manager

DATE: April 23, 2015

## SUBJECT: $44^{\text {th }}$ Monthly Update on Drought and Water Resource Management

## ESA/Silvery Minnow Update

There are no new updates on endangered species related to our water supply (e.g., silvery minnow, $S W$ willow fly catcher, yellow billed cuckoo, etc.). River and wetland conditions are still expected to be challenging unless significant monsoonal activity occurs. All resource agencies will attempt compliance with the prevailing Biological Opinion.

## CURRENT UPDATE - GENERAL WATER RESOURCE MANGEMENT

As the Committee/Board is aware, our region is still suffering through a drought. Our region has gone through four consecutive years of record drought and heat, and it appears that we are in our fifth year of drought - albeit drought conditions have eased slightly. This drought is likely present significant challenges to all water purveyors, utilities, and irrigators going forward into the rest of this water-year.

Most models are still predicting the likelihood of a return of an El Nino weather pattern, 50\%$60 \%$ chance of a return to EI Nine conditions with normal to above normal precipitation over the spring and summer. The most recent April NOAA ENSO update states that:

ENSO- (El Nine) conditions continue to improve with increasing equatorial sea surface temperature (SST) anomalies continuing across the Pacific Ocean. There is an approximate $50 \%-60 \%$ chance of El Vino conditions will continue through summer 2015.

It is worth noting that City of Santa Fe has invested in a robust and diverse portfolio of four distinct water supply sources that allows for flexibility in meeting demand: Buckman well field, City well field, Canyon Road Water Treatment Plant on the Upper Santa Fe River, and the

Buckman Direct Diversion on the Rio Grande. Supply from these groundwater and surface water sources are expected to be adequate in meeting local demands. The City also has a considerable amount of SJCP water stored ("banked from previous years") in reservoirs upstream from the BDD diversion, and that water could be called for if needed over the coming 2 or 3 years.

## LOCAL CONDITIONS

## Source of Supply Utilization Summary

March 2015

| City Wells | $0.276 \mathrm{mg} / \mathrm{m}$ | $0.85 \mathrm{af} / \mathrm{m}$ |
| :--- | ---: | ---: |
| Buckman Wells | $0.00 \mathrm{mg} / \mathrm{m}$ | $0.00 \mathrm{af} / \mathrm{m}$ |
| CRWTP | $99.24 \mathrm{mg} / \mathrm{m}$ | $304.56 \mathrm{af} / \mathrm{m}$ |
| BRWTP | $34.84 \mathrm{mg} / \mathrm{m}$ | $357.70 \mathrm{af} / \mathrm{m}$ |
| Other Wells(Osage, MRC, etc) | $0.00 \mathrm{mg} / \mathrm{m}$ | $0.00 \mathrm{af} / \mathrm{m}$ |

## Upper Santa Fe River/CRWTP

|  | Total Combined Reservoir Level | Santa Fe Snow Gage | Reservoir Inflow |
| :---: | :---: | :---: | :---: |
| April 23, 2015 | 14.3.0\% | 31.00 inches | 4.78 MGD |
| 5 -Year Average for This Date (2010-2014) | 54.37 \% | 23.02 inches | 6.13 MGD |

As of April 23, 2015 total combined storage in Nichols and McClure reservoirs is $14.3 \%$ of total (or about 572 acre-feet of storage out of 4,000 acre-feet of capacity). Some flows have been bypassed or released due to construction on the new intake facilities and the start of irrigation season. Inflows are expected to continue for the near future and so the reservoirs have been managed to allow for water treatment plant production, active construction, irrigation, and draining/drying.

## Buckman Regional Water Treatment Plant (BDD)

Flows in the Rio Grande are relatively high for this time of year (earlier than normal runoff), and turbidity has been generally good. The BDD has been able to divert and treat in line with demand with the exception of time off-line for repairs/maintenance to the diversions structure.

## REGIONAL CONDITIONS

## Rio Grande Basin

Surface flows in the Rio Grande and its tributaries through mid-April have been relatively good. However, storage levels in regional reservoirs are still very low (see attached figure). There was very little carry-over storage from 2014 into 2015. There are no new updates regarding Wild Earth Guardians legal actions or endangered species issues.

## San Juan Basin

It should be stressed that, conditions could significantly worsen for San Juan Chama Project deliveries this coming year, if the drought persists, due to a lack of carry-over storage in Heron from last year to this year. Heron Reservoir is currently at a very low level. Recent estimates by the BoR suggest that the deliveries from the San Juan-Chama Project should be about 50\%-55\% of normal firm yield, but if there are dry conditions and unseasonably warm temperatures, these figures will likely continue to be revised downward.

## Rio Grande Water Fund/Watershed Management Update

The Rio Grande Water Fund Charter will be going before Santa Fe City Council on Wednesday, April 29, 2015.

## April Southwest Climate Outlook

Precipitation: In the pas 30 days, most of the southwestem US. received below-average precipitation (Fig 1) The Precipitation: In past 30 days, most of forecasts suggested), water year observations since October 1 show below-average precipitation across much of Arizona and portions of New Mexico. The situation is direr in other western regions, with California, the Pacific Northwest, and the Intermountain West recording significantly below-average winter precipitation (Fig. 2).
Temperature: In the past 30 days, temperatures were above-average across Arizona and New Mexico, with anomalies between 4 to 8 degrees $F$ above average across most of the region (Fig 3). In the six months since the water year began on October 1, Arizona, California, Nevada, Oregon, and Washington saw record-warm average temperatures (Fig. 4).
Snowpack: High temperatures and below-average precipitation led to limited snowpack across the westem U.S. As of April 16, snow water equivalent (SWE) is below average in every basin in the West (Fig. 5). In our region, SWE ranged from 0 to 32 percent of average in Arizona and 0 to 50 percent of average in New Mexico.
Drought \& Water Supply: The U.S. Drought Monitor highlights persistent drought conditions across the West and
identifies both short- and long-term drought conditions in Arizona and New Mexico. Total reservoir storage in March was 45 percent in Arizona (same value as last year) and 26 percent in New Mexico (compared to 24 percent last year) (see reservoir storage on page 5 for details). are on fire risk potential from now through the onset of the monsoon.
Wildfire: There is potential for wildfire in any month of the year, but March through June is the windiest time of year (see page 4), which increases likelihood of red flag warning days. This is also one of the driest times of the year, so all eyes
El Niño: Despite a relatively late start, El Niño continued for a second consecutive month, with potential for a stronger event as we look forward towards summer and fall of this year (see page 3 for details).
Precipitation \& Temperature Forecasts: The April 16 NOAA-Climate Prediction Center seasonal outlook predicts aboveaverage precipitation this spring into summer for most of the Southwest and Intermountain West, although California and southern Arizona are notable exceptions. Temperature forecasts remain split across the region, with elevated chances for above-average temperatures along increased chances for below-average temperatures in western Texas and into eastern New Mexico.
Streamflow Forecasts: The April 1 forecast for the Colorado, Rio Grande, and Arkansas river basins project well belowaverage streamflow for Arizona and New Mexico. This pattern is repeated across much of the western U.S., especially in Utah, Nevada, California, New Mexico, and Arizona (Fig. 6), following the unusually warm and dry conditions in March.

## CLICK TO TWEET

## Tweet April SW Climate Outlook

 Streamflow, and Wildfire http:/Bit.Iy/1DNxUNI

El Niño Sticks Around, Snowpack, Drought,

## Reservoir Volumes <br> DATA THROUGH MAR 31,2015

## Data Source: National Water and Climate Center, Natural Resources Conservation Service


One-Month











- Strong signals in early 2014 stalled, delaying El Niño's onset until last month, when ocean-atmosphere coupling and an additional Kelvin wave indicated more favorable conditions. Despite this late start, El Niño continued for a second consecutive month. Recent increases in sea suriace temperature (SST) anomalies (Fig. 1-2) and ongoing convective activity associated with El Niño-favorable conditions indicate we might be witnessing a two-year El Niño event. These forecasts rely on projections during a time of increasing uncertainty, and the so-called "spring predictability barrier" continues to make it difficult to anticipate how seasonal changes will help or hinder El Niño.
The most recent forecasts continue to offer mixed signals regarding El Niño, but are more bullish this spring than last year. On April 9, the NOAAClimate Prediction Center (CPC) issued an El Niño advisory with a 70 percent chance that El Niño will continue through summer 2015 and more than a 60 percent chance the event would last through fall. They pointed to the large Kelvin wave, along with ongoing ocean-atmospheric coupling, as an indication a weak EI Niño event would linger, with potential for further development in the long term. On April 10, the Japan Meteorological Agency declared the El Niño event likely to have ended in winter 2015, with current conditions being ENSO-neutral, but also projected El Niño
 Meteorology upgraded their tracker to "alert" status (one below an official El Niño designation), with warming in the tropical Pacific, weak trade winds, and projected additional ocean warming listed as contributing factors. On April 16, the International Research Institute for Climate and Society (IRI) and CPC forecasts highlighted increasingly favorable oceanic and atmospheric conditions, with an 80 percent probability of EI Niño extending from summer into fall, and a 70 percent probability of El

 for a moderate or even strong event by summer or early fall (Fig. 4).
This El Niño event continues to defy expectations, with some models indicating conditions are strengthening rather than weakening during the spring transition. Forecasting or characterizing this event remains difficult
 of this El Niño guarantees it will be of interest to climatologists for years



 favorable to El Niño were thought to have been driving increased storm activity in the Southwest.
Figure 1.
Australian Bureau of Meteorology
Figure $2 \rightarrow-2$
NOAA - National Climatic Data
Center
Figure 3.
Figure 4.
NOAA-Climate Prediction Center
hith:/hwhwcpc ncep notad gov/

A joint regional project of the City of Santa Fe aña Santa Fe County to builur a reliable and sustainable wator supply.

## Memorandum

Date: May 7, 2015
To:
BDD Board of Directors
From:
Bernardine R. Padilla


Subject: BDD Quarterly Update on Public Relations and Marketing

ITEM AND ISSUE: Quarterly Update on Public Relations efforts and opportunities

## BACKGROUND AND SUMMARY:

This public relations and outreach report shows events, tours, education and key meetings from January to May 2015.

Several scheduled tours were canceled due to bad weather and snowy days.
Key Events included:

- Participation in the Sustainable Santa Fe Awards as a city leader by example in environmental sustainability for the Habitat Restoration project, and the Booster Station 2A Solar Array. New posters were created on the habitat restoration project for this event and use at future events.
- 3 General Facility Tours
- 8 Educational Outreach offerings - Tours or student education
- 7 Public Relations or Marketing Outreach efforts
- 1 news article specific to BDD in the The Santa Fe Reporter, and many other local and national news stories with mentions of BDD, City of Santa Fe, utilities, Conservation or Santa Fe County water mentions.
- 1 NY Times story and interview with Rick Carpenter containing BDD, City of Santa Fe conservation efforts, and drought effects in states from California to the East coast.



May 7, 2015

## Public Relations and Marketing Events O3 2015

January

| Virtual Tour Filming: | River Diversion and facilities with Joe Abeyta |
| :--- | :--- |
| PR Outreach: | City Hall Live interview on the BDD Virtual Tour - Joe Abeyta, Randy Sugrue |
| Tours: | Homewise staff tour of BDD plant |
|  | Las Campanas Realtor tour of BDD plant |
| Marketing Outreach: | Legislator gift bag through City of SF-BDD Water Bottles |
| Education Outreach: | SF High School Career Day, Charles and Berni |

## February

Education Outreach: SFPS Sustainability Class Tour of BS1A/BS2A, Diversion, with River Source Children Youth Services After School kids Plant lab testing and BDD tour Journey Montessori Elementary School plant tour
Meeting: Joe Abeyta, Rick Carpenter for tour script re-reads
Marketing Outreach: NM Municipal League conference gift bags-BDD pens
Media:
SF Reporter Article, "Buckman Diversion Difficulties"
March
Educational Outreach: SFPS Sustainability Class BDD plant tour canceled due to snow
PR Outreach: City Hall Live interview, Joe Abeyta on the BDD Virtual Tour - Randy Sugrue
Meeting:
Paragon Electric
April
Education Outreach: Kids Water Fiesta 2 day event, "From the River to the Bottle" Filtration experiment UNM Sustainability Class BDD plant tour
PR Event: Sustainability SF Awards participation; Leader by example in sustainability

- BS2A Solar Array poster display
- Habitat Restoration poster display; new poster created

Staff Wellness:
Education Outreach:
Naprapathy Stress Relief Day mini treatments, over $50 \%$ staff participation
Chuck presents at Rocky Mountain Am. Water Works Assoc. workshop in Albq. on, "Modifications to Improve Water Quality in Arlington, TX"
May

PR Event:

Tour:

Media:

Community Days, Reuse \& Refill - Free water bottle refills with City water buffalo tank
SF Century Bike Ride water bottle refills; 2 water buffalo tanks on Century bike route
Northern Operators School Espanola operators training to BDD plant \& diversion tour
NY Times article, interview Rick Carpenter BDD mention



[^0]:    * Buckman Direct Diversion. 341 Caia del Rin Road. Santa Fe. New Mexico 87506 www.hddnroiect.org *

