

TECHNICAL MEMORANDUM

To: Eagle Bend Metro District (EBMD)-Board of Directors

From: Mitchell Weldon and Justin Korkus, PE

Date: September 17th, 2020

Subject: Final Water Operations Summary for July 2020

CC: Larry Moore-President-EBMD, Denise Denslow-District Manager CliftonLarsonAllen, LLC.

Project No.: 0416019.01

This Technical Memorandum provides a final summary of the EBMD water operations for the month of July 2020.

Water Supply Operations

South Well:

- During the month of July, approximately 10,466 kilogallons (kgal) of water were delivered from the South Well to the Heritage Eagle Bend (HEB) golf course irrigation pond.
- The maximum production flow rate was 278 gpm, and the minimum production flow rate was 250 gpm.
- During recovery periods in July, the water level in the South Well recovered to a maximum of 285 feet above transducer. Pumping water level reached a minimum of 143 feet above transducer.
- The pump ran for all but 88 hours (roughly 4 days) during the month of July.

Figure 1 – South Well Drawdown and Recovery (July 2020)

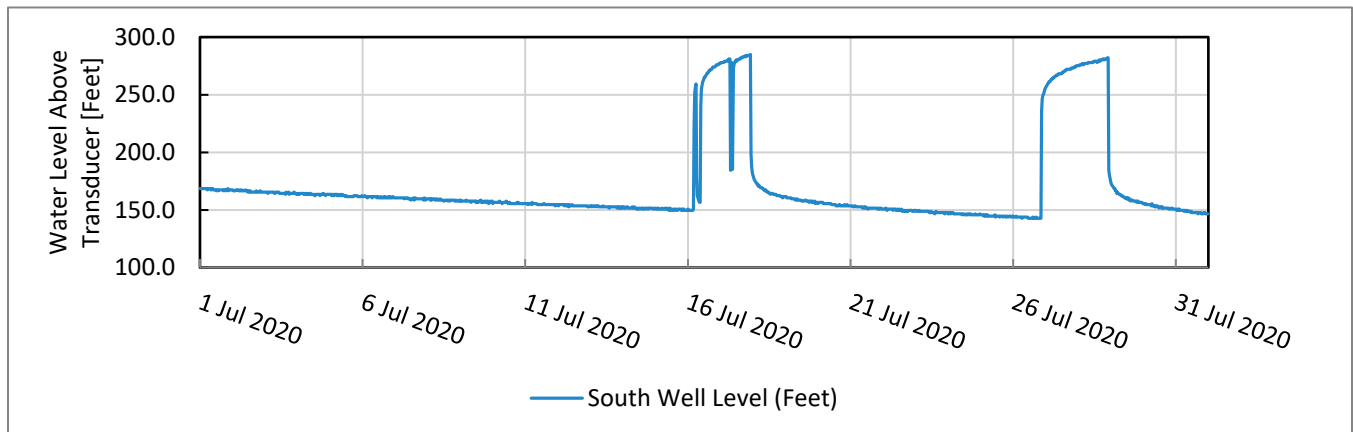
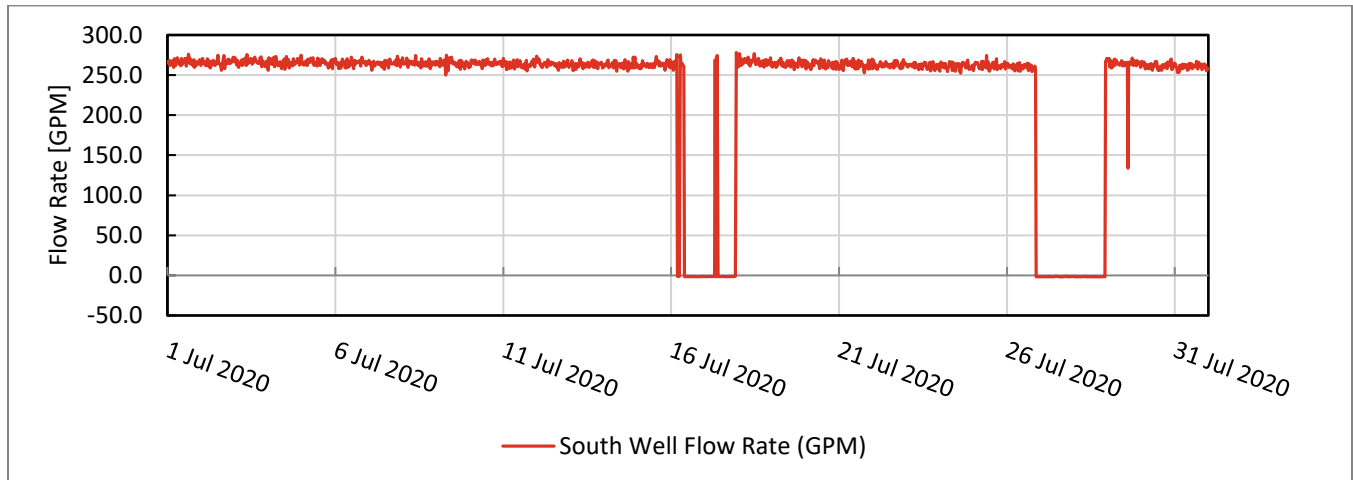


Figure 2 – South Well Production Rate (July 2020)



North Well:

- During the month of July, approximately 5,596 kilogallons (kgal) of water were delivered to the Heritage Eagle Bend (HEB) golf course irrigation pond.
- The maximum production flow rate was 168 gpm, and the minimum production flow rate was 131 gpm.
- During July, the pumping water level reached a minimum of 122 feet. During all recovery periods during the month, the maximum water level was 276 feet above transducer.
- The pump ran for all but 113.5 hours (roughly 5 days) during the month of July.

Figure 3 – North Well Drawdown and Recovery (July 2020)

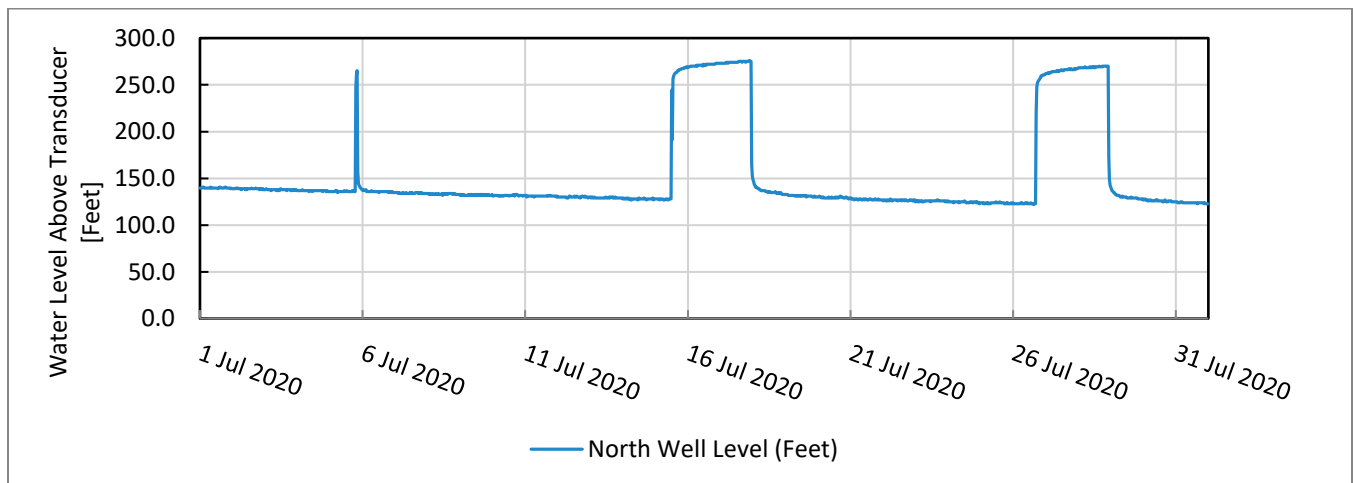
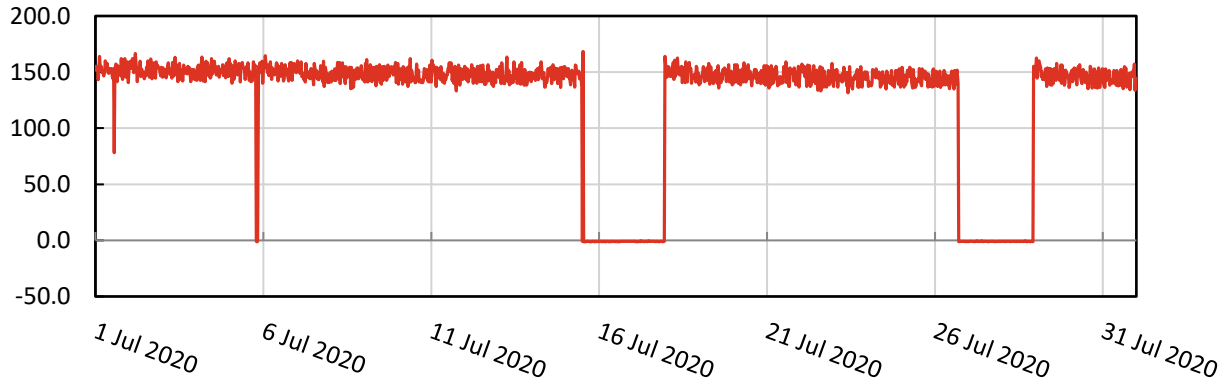


Figure 4 – North Well Production Rate (July 2020)



ECCV/WISE Waterline:

- The ECCV/WISE line was winterized in October 2019 and was not used to supplement the wells for the irrigation pond this month.
- Per discussion with Glen Bedell, ECCV Water Operator, supplemental water was not available during July or August and is unlikely to be available during the remainder of the irrigation season from ECCV/WISE.

Buchanan Tap:

- The Buchanan Tap was used for supplemental irrigation water during July between the following dates:
 - July 2nd to July 10th – Total volume metered: 3,228 kgal
 - Intermittent use between July 21st and July 24th – Total volume metered: 0.258 kgal
 - July 2020 Buchanan Tap total: 3,487 kgal

Field Operations

- On July 13th, Mitchell Weldon (Lamp Rynearson) visited both well sites to clear off VFD fan screens and review wellsite conditions.

Utility Locates

- Lamp Rynearson monitors utility locate requests on behalf of the District for buried utilities owned and operated by the District. Notifications are sent by the Utility Notification Center of Colorado (UNCC) to Lamp Rynearson, reviewed, and responded to as necessary. During the month of July, Lamp Rynearson responded to 2 utility locate tickets. No site visits were required for response purposes.
- The handover of UNCC response duties to Diversified Underground was completed during July.

Water Production Summary

Water production data has been updated through July 2020. Monthly numbers for July are updated upon receipt of power and water bills from Xcel Energy and Aurora Water, respectively. EBMD's historical water delivery summary is provided in Table 1 from 2010 through present, and graphically in Figure 5 - Cumulative Annual Water Deliveries by Month, and Figure 6 - Monthly Water Deliveries (2010-2020). For monthly water production and billing for 2020, refer to Table 2.

Table 1 – Annual Water Production

| Year | North Well | | South Well | | Buchanan Tap | | ECCV Line, Aurora Pkwy Tap | | Total |
|------------------------|------------|----|------------|----|--------------|----|----------------------------|----|--------|
| | kgal | % | kgal | % | kgal | % | kgal | % | kgal |
| 2010 | 26,564 | 33 | 43,702 | 54 | 0 | 0 | 10,259 | 13 | 80,525 |
| 2011 | 29,408 | 37 | 38,888 | 48 | 0 | 0 | 12,273 | 15 | 80,569 |
| 2012 | 25,416 | 28 | 55,493 | 61 | 0 | 0 | 10,368 | 11 | 91,277 |
| 2013 | 26,223 | 38 | 38,791 | 55 | 0 | 0 | 4,982 | 7 | 69,996 |
| 2014 | 18,472 | 33 | 33,808 | 60 | 0 | 0 | 4,036 | 7 | 56,316 |
| 2015 | 20,510 | 30 | 37,999 | 57 | 0 | 0 | 8,650 | 13 | 67,159 |
| 2016 | 21,569 | 25 | 55,478 | 63 | 0 | 0 | 10,824 | 12 | 87,871 |
| 2017 | 21,277 | 31 | 33,884 | 49 | 0 | 0 | 14,097 | 20 | 69,258 |
| 2018 | 22,971 | 28 | 50,100 | 62 | 5,400 | 7 | 2,747 | 3 | 81,218 |
| 2019 | 22,265 | 29 | 45,311 | 60 | 3,654 | 5 | 4,449 | 6 | 75,679 |
| 2020 | 17,905 | 30 | 34,930 | 59 | 6,293 | 11 | 572 | 1 | 59,700 |
| Average (2010-2019) | 23,123 | 31 | 43,306 | 57 | 4,527 | 1 | 8,047 | 11 | 75,483 |

Table 2 – Monthly Water Production and Billing for Eagle Bend Metro District (2020)

| Eagle Bend Metro District Water and Energy Utilities - through May 2020 | | | | | | | | | | | | | | |
|---|---------|----------|----------|-------------|-------------|-------------|--------------|-------------|-----|------|-----|-----|-----|--------------------------|
| Service Month (nominal) | Initial | January | February | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec | YTD |
| Meter Reads | | | | | | | | | | | | | | |
| North Well (Meter No. 12066794) | 52,528 | 52,528 | 52,528 | 52,528 | 53,419 | 57,913 | 65,271 | 70,433 | | | | | | |
| South Well (Meter No. 12269060) | 7,443 | 7,443 | 7,443 | 7,448 | 10,083 | 19,523 | 32,630 | 42,373 | | | | | | |
| ECCV (Meter No. 05359993) | 17,280 | 17,280 | 17,280 | 17,280 | 17,280 | 17,280 | 17,280 | 17,280 | | | | | | |
| Aurora-Buchanan Way (Meter No. 06170036) | 34,351 | 34,351 | 34,351 | 34,351 | 34,351 | 34,353 | 38,114 | 40,644 | | | | | | |
| Aurora-7623 South Aurora Parkway (Meter No. 05150070) | 6,509 | 6,509 | 6,509 | 6,509 | 6,572 | 6,653 | 6,929 | 7,081 | | | | | | |
| kgal | | | | | | | | | | | | | | |
| North Well | | 0 | 0 | 0 | 891 | 4,494 | 7,358 | 5,162 | | | | | 0 | 17,905 |
| South Well | | 0 | 0 | 5 | 2,635 | 9,440 | 13,107 | 9,743 | | | | | 0 | 34,930 |
| ECCV | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 0 | 0 |
| Aurora (Buchanan Way) | | 0 | 0 | 0 | 0 | 2 | 3,761 | 2,530 | | | | | 0 | 6,293 |
| Aurora (Aurora Pky) | | 0 | 0 | 0 | 63 | 81 | 276 | 152 | | | | | 0 | 572 |
| Total - kgal | | 0 | 0 | 5 | 3,589 | 14,017 | 24,502 | 17,587 | | | | | | 59,700 |
| Total - af | | 0.0 | 0.0 | 0.0 | 11.0 | 43.0 | 75.2 | 54.0 | | | | | | 183.2 |
| COA Billing* | | | | | | | | | | | | | | * Late fees not included |
| North Well | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$392.04 | \$1,977.36 | \$3,237.52 | \$2,271.28 | | | | | | \$7,878.20 |
| South Well | \$0.00 | \$0.00 | \$0.00 | \$2.20 | \$1,159.40 | \$4,153.60 | \$5,767.08 | \$4,286.92 | | | | | | \$15,369.20 |
| ECCV | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | | | | | \$0.00 |
| Aurora (Buchanan Way) | \$0.00 | \$65.82 | \$65.82 | \$65.82 | \$65.82 | \$80.24 | \$27,182.63 | \$18,307.12 | | | | | | \$45,833.27 |
| Aurora (Aurora Pky) | \$0.00 | \$17.07 | \$17.07 | \$17.07 | \$471.30 | \$601.08 | \$2,007.03 | \$1,112.99 | | | | | | \$4,243.61 |
| Total | \$0.00 | \$82.89 | \$82.89 | \$85.09 | \$2,088.56 | \$6,812.28 | \$38,194.26 | \$25,978.31 | | | | | | \$73,324.28 |
| Xcel Energy Billing | | | | | | | | | | | | | | |
| North Well | \$0.00 | \$391.44 | \$391.44 | \$407.09 | \$426.28 | \$4,170.92 | \$5,591.30 | \$5,327.70 | | | | | | \$16,706.17 |
| South Well | \$0.00 | \$470.47 | \$470.47 | \$488.99 | \$2,840.56 | \$5,883.75 | \$7,147.75 | \$6,858.18 | | | | | | \$24,160.17 |
| Total | \$0.00 | \$861.91 | \$861.91 | \$896.08 | \$3,266.84 | \$10,054.67 | \$12,739.05 | \$12,185.88 | | | | | | \$40,866.34 |
| Xcel \$/kgal (approx., some time lag) | | | | | | | | | | | | | | |
| North Well | \$0.00 | - | - | - | \$0.48 | \$0.93 | \$0.76 | \$1.03 | | | | | | \$0.93 |
| South Well | \$0.00 | - | - | \$97.80 | \$1.08 | \$0.62 | \$0.55 | \$0.70 | | | | | | \$0.69 |
| Combined | \$0.00 | - | - | \$179.22 | \$1.08 | \$0.62 | \$0.62 | \$0.82 | | | | | | \$0.77 |
| HOA Billing | \$0.00 | \$0.00 | \$0.00 | \$25,013.75 | \$35,150.73 | \$63,916.93 | \$110,385.52 | \$85,325.97 | | | | | | \$319,792.90 |
| Net to District | \$0.00 | - | - | \$24,032.58 | \$29,795.33 | \$47,049.98 | \$59,452.21 | \$47,161.78 | | | | | | \$207,491.88 |
| Credit towards ECCV SL | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | | | | | | \$0.00 |

Figure 5 – Cumulative Annual Water Deliveries by Month (2010 – 2020)

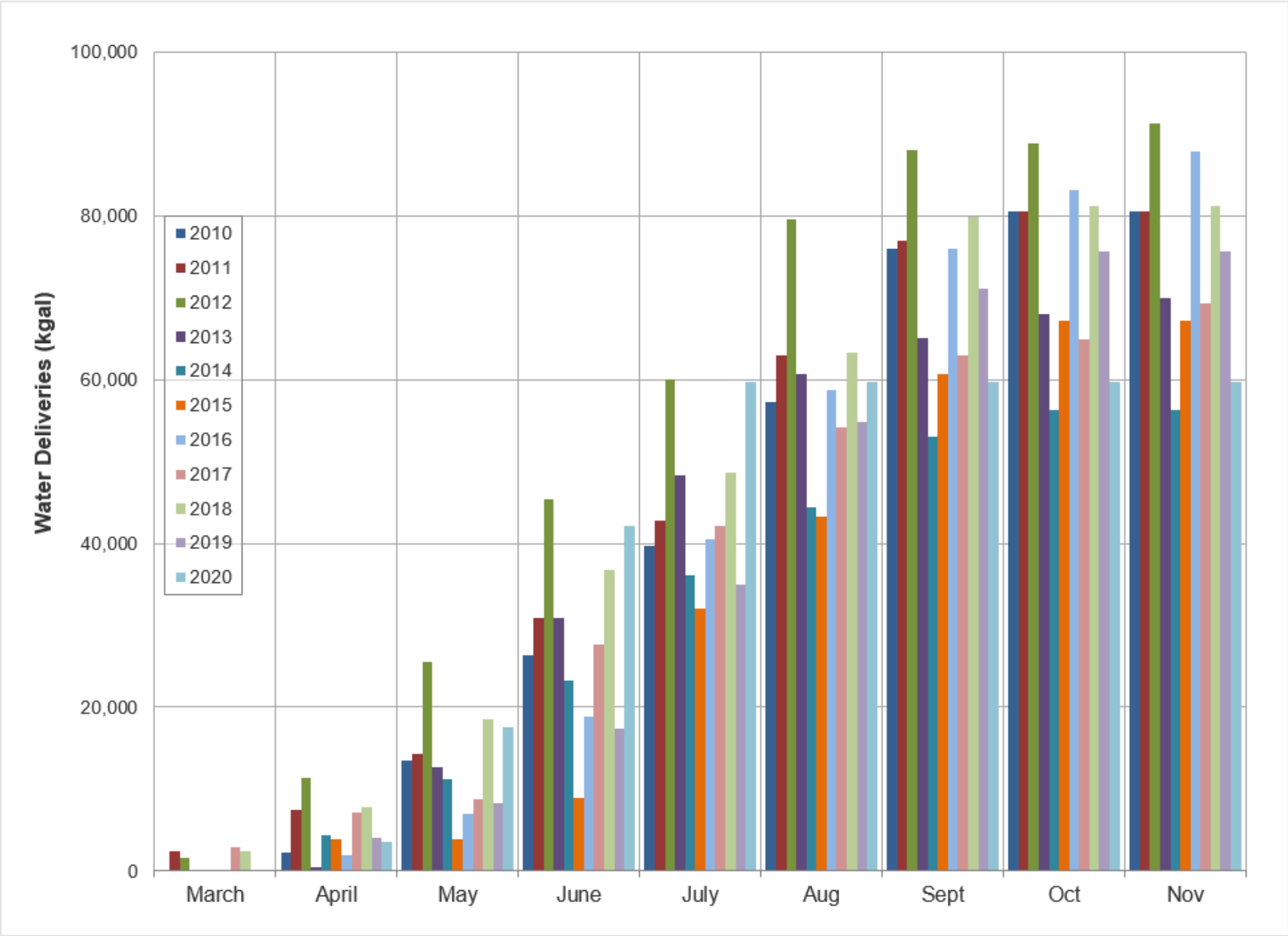


Figure 6 –Historic Monthly Water Deliveries (2010 – 2020)

