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# MEMORANDUM

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Date: October 3, 2017

To: The Honorable Chair and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator

A handwritten signature in black ink, appearing to read "C.H. Huckelberry", is written over the printed name and title.

Re: **Davis-Monthan Sewer Connection Fee Claim**

Recently, there has been some discussion about the disposition of a claim filed by Pima County against Davis-Monthan Air Force Base (DMAFB). This claim relates to unpaid sewer connection fees from 1993.

The County and DMAFB staff have discussed this issue on a least three occasions. The last discussion occurred on September 26, 2017 and resulted in a tentative agreement regarding payment of fees for expansion of sewer flows requiring additional treatment capacity by Pima County. Please refer to Attachment 1 for materials discussed at this meeting.

In the past, a dispute over both sewer user fees and connection fees was settled in a 1988 Settlement Agreement. This Agreement resulted in DMAFB paying sewer user fees for treatment of sewage generated within DMAFB. Since 1988, sewer user fees have been continuously paid by DMAFB during the intervening period. The DMAFB paid sewer connection fees from 1988 to 1993.

The measurement of actual sewer flows was not possible until the installation of a sewer flow meter in 2005. This flow meter has been in place for approximately two years and has accurately measured wastewater flows from DMAFB. During this period, the flows have been relatively constant while measured water consumption at the supply wells within DMAFB have significantly varied. Based on water supply records for the period of 1987 to 1993, it is likely the payment of sewer connection fees during this period exceeds what is now the sewer flow. Hence, no additional sewer connection fees are due from DMAFB post-1993 with one exception.

This exception is for excessive stormwater infiltration flows and requires significant excess treatment capacity at our treatment facilities. In Attachment 2 the red dots on the graphic represent these inflows. This short, periodic significant inflow also disrupts the treatment process causing many difficulties in the biological processes and systems for wastewater treatment.

The Honorable Chair and Members, Pima County Board of Supervisors  
Re: **Davis-Monthan Sewer Connection Fee Claim**  
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The County generally agrees that any future significant wastewater sewer flows in excess of the average of the last two years, approximately 500,000 gallons per day, will trigger negotiations between the County and DMAFB regarding payment for any long term, sustained additional treatment capacity treatment needed above 500,000 gallons per day. We have also asked that DMAFB pursue sewer inflow remediation projects, totaling \$7.5 million. The purpose of this remediation project is to significantly reduce and/or eliminate the periodic stormwater inflows that greatly exceed the average daily flow of wastewater from DMAFB.

Based on the above, we are proceeding to: (1) finalize details of a draft settlement agreement with DMAFB for subsequent approval by the US Air Force and the Board of Supervisors; and (2) dismiss the pending claim against the US Air Force.

CHH/anc

c: Charles Wesselhoft, Deputy County Attorney  
Carmine DeBonis, Jr., Deputy County Administrator for Public Works  
Jackson Jenkins, Director, Regional Wastewater Reclamation

# ATTACHMENT 1

## **FBNV 190013, Repair Sanitary Sewer System**

Program Amount: \$7.5M

FY= 2019

This project addresses all manhole repairs, to include the following:

- a. Replacement of 19 manholes
- b. Structural repairs on 28 manholes
- c. Relining 30 manholes
- d. Nonstructural repairs to 23 manholes
- e. Sewer line rehabilitation
  1. Cured-in-place pipe (CIPP) lining on 2,978 LF of 8" Pipe
  2. 2,782 LF of 12" Pipe
  3. 1,167 LF of 15" Pipe
- f. General inflow repairs
- g. Repair of degraded manholes and sewer line in sub-basin 1
- h. Demolition of oil water separators 227 and 234
- i. Abandonment of sewer main near the Craycroft Gate

**DAVIS-MONTHAN AFB**  
**PROPOSAL: SEWER CAPACITY RESERVATION BASELINE**  
26 September 2017

**BACKGROUND**

- Sewer connection fees are intended to be a one-time assessment for the creation of collection and treatment capacity in the sewer system. These fees ensure that Pima County (PC) can manage the wastewater flows that may be discharged from a given location.
- Davis-Monthan Air Force Base (DMAFB) and PC resolved the matter of disputed sewer connection fees owed by DMAFB through the year 1993 via payments made pursuant to the 1988 Settlement Agreement. With those payments, DMAFB reserved *at least* the amount of sewer system capacity that it was actually using up to 1993, when the last payments under the Settlement Agreement were made by DMAFB.
- As such, if the flow of wastewater discharged from DMAFB since 1993 is no greater than the flow that was being discharged in 1993 or before, DMAFB is not creating additional demand for sewer system capacity above the amount reserved regardless of new construction on base and the addition of plumbing fixtures.
- If no new demand is being created, no additional capacity need be reserved by DMAFB. If, however, DMAFB begins discharging more wastewater to the sewer system than it discharged in or before 1993, then PC would have the right to assess fees to reserve additional sewer system capacity for DMAFB.
- Because wastewater flows were not measured before 2016, neither PC nor DMAFB knows how much wastewater was discharged to the sewer at any time before May 2016. Thus, in order to establish the amount of capacity that DMAFB reserved through the Settlement Agreement payments, PC and DMAFB would need to agree on a method for estimating historic wastewater flows.
- If agreement can be reached on the method, DMAFB will pay future capacity reservation fees based on measured wastewater discharges that exceed the estimated highest historic wastewater flow.
- DMAFB uses on-site wells to produce all of its water supply that could potentially be discharged as wastewater (i.e. treated effluent received from the City of Tucson does not result in the production of wastewater discharged to the sewer system). Monthly water production data are available for each year between 1949 and 1980 and again from 1997 to present. Annual water production data are available for 1986 to 1997. Only for the five-year period from 1981 to 1985 do no water production data exist.

**DATA**

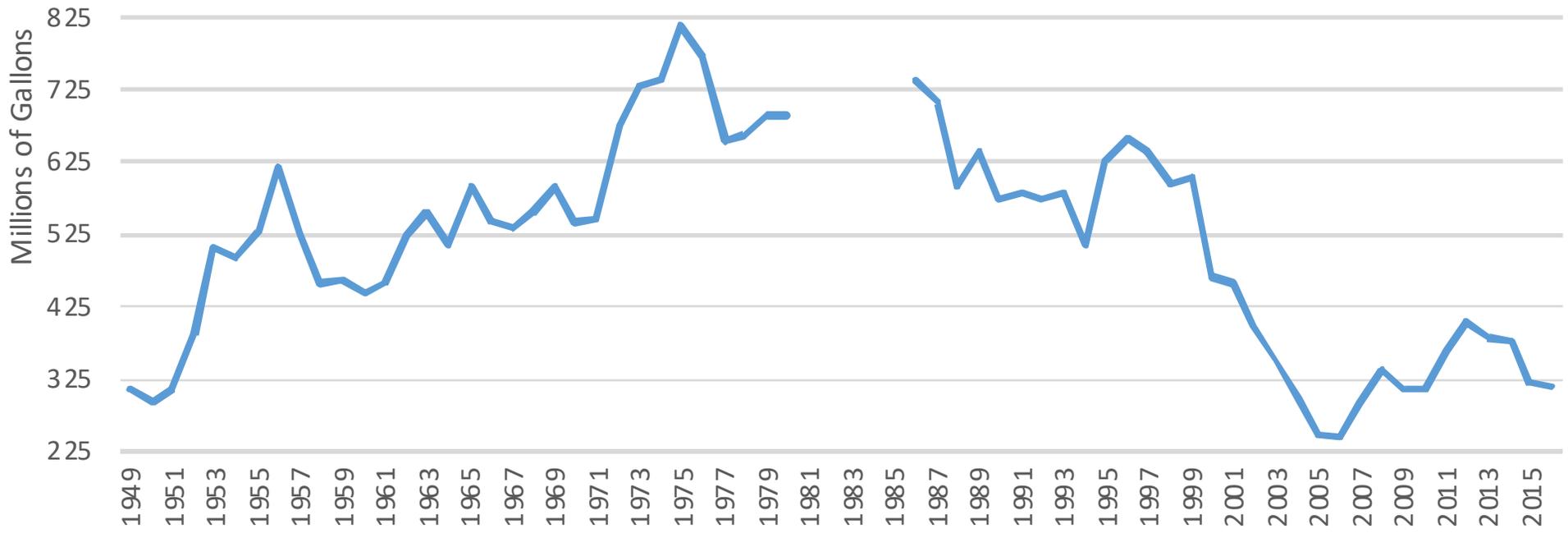
- Total water production at DMAFB in 1949 was 311 million gallons per year (mgy). Water production peaked at 813 mgy in 1975 and then began dropping in the mid-1990s. Water production reached a historic low of 244 mgy in 2006 and has typically ranged from 300 to 400 mgy since then.
- Monthly water production data from May 2016 to August 2017, the period for which wastewater discharges have also been metered, suggests that water production remains in the 300-400 mgy range for 2016 and 2017.
- While some of the water produced at DMAFB is consumptively used on base for landscape watering, dust control, construction water, water line breaks, and other purposes, the remainder is discharged to the sewer system. If the rate of consumptive use is consistent over time, water production and wastewater flows should be well correlated. However, statistical analysis of monthly water production and sewer flows since May 2016 shows poor correlation ( $r = 0.255$ ). This suggests that consumptive uses, which are not fully metered, vary substantially from month to month.

- Only water consumptively used for the Blanchard Golf Course has been consistently metered over time. However, even golf water use data is available only beginning in 1990. Other consumptive uses were metered for a short time between 2013 and 2016, but they have not been metered since before the wastewater discharges began being measured. Therefore, it is impossible to account for consumptive uses when comparing water production to wastewater discharges.
- Over the period from May 2016 to August 2017, wastewater flows ranged from 43% to 79% of water production. On average, wastewater flows were 58% of water production over the most recent 12 months (September 2016 through August 2017).

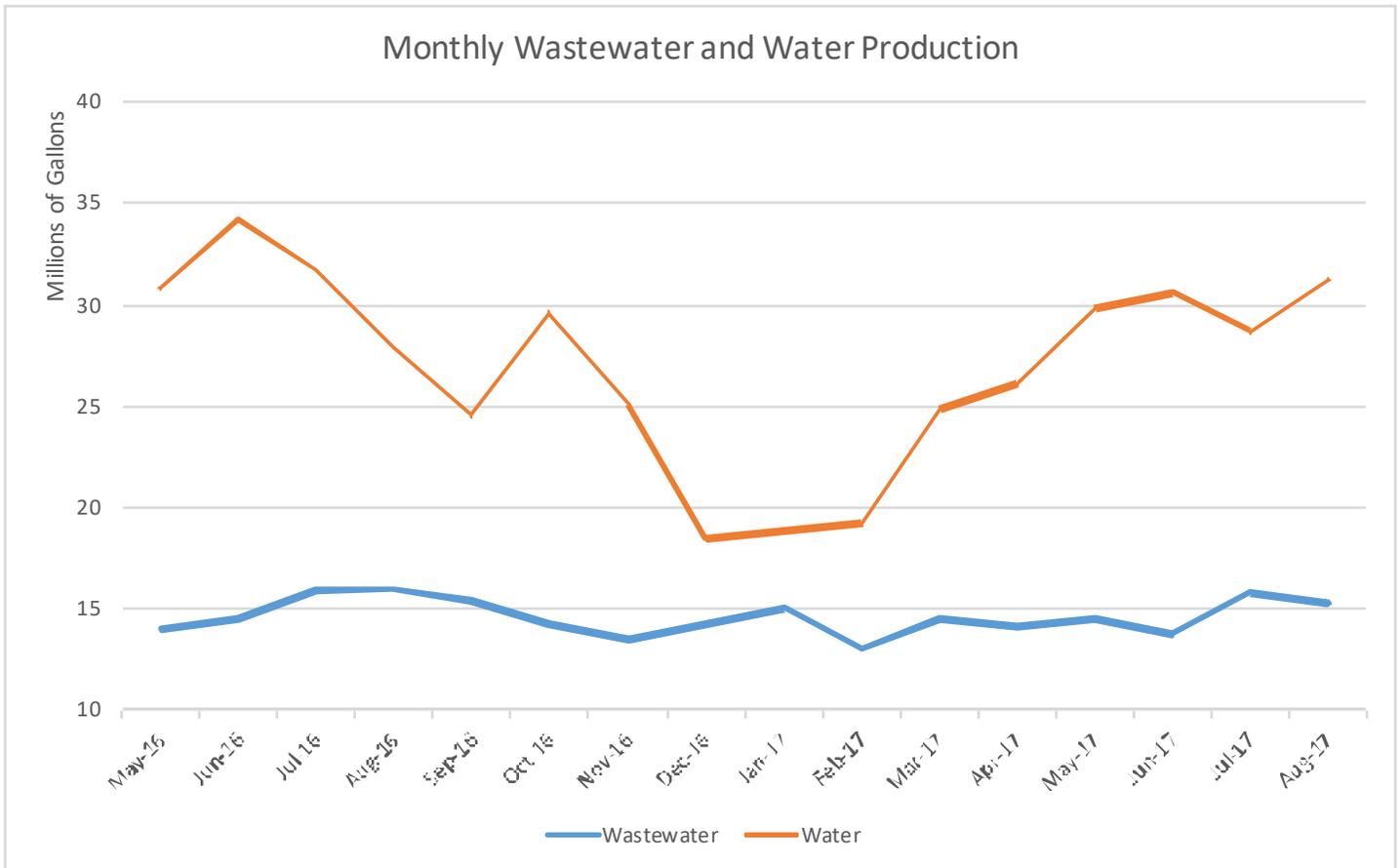
#### **PROPOSED BASELINE**

- Assume that 60% of DMAFB water production is discharged to the sewer system.
- 60% of peak pre-1993 water production is 488 mgd.

# Total Annual Water Production

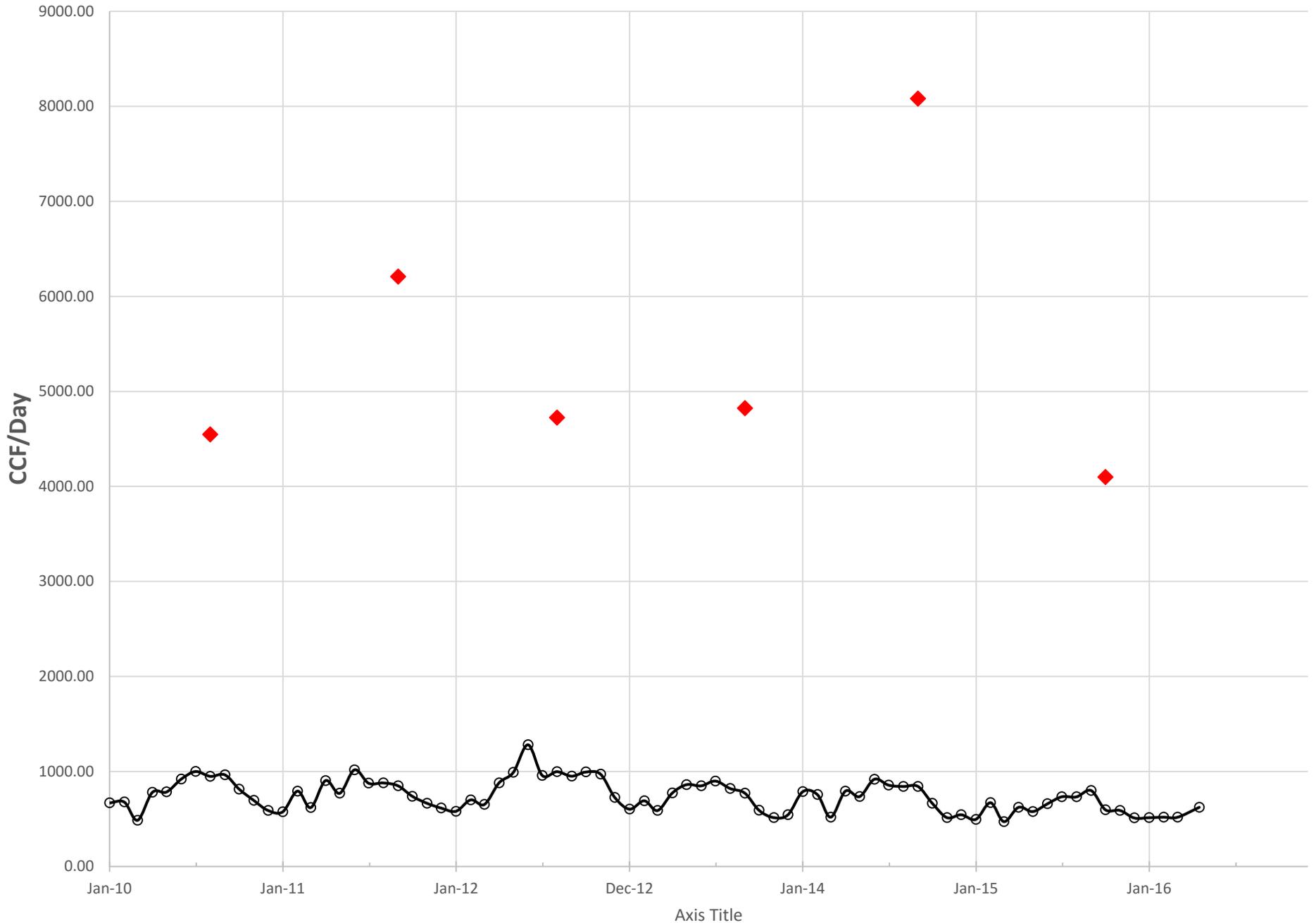


| Month                   | Wastewater | Water      | Sewer as % of Water |             |
|-------------------------|------------|------------|---------------------|-------------|
| May-16                  | 13,952,893 | 30,887,275 | 45.17%              | r= 0.255478 |
| Jun-16                  | 14,466,170 | 34,179,128 | 42.32%              |             |
| Jul-16                  | 15,855,281 | 31,780,302 | 49.89%              |             |
| Aug-16                  | 15,995,232 | 27,847,017 | 57.44%              |             |
| Sep-16                  | 15,450,688 | 24,614,798 | 62.77%              |             |
| Oct-16                  | 14,307,952 | 29,563,476 | 48.40%              |             |
| Nov-16                  | 13,449,191 | 25,072,893 | 53.64%              |             |
| Dec-16                  | 14,258,581 | 18,459,204 | 77.24%              |             |
| Jan-17                  | 15,039,171 | 18,841,533 | 79.82%              |             |
| Feb-17                  | 13,088,631 | 19,222,125 | 68.09%              |             |
| Mar-17                  | 14,500,201 | 24,839,213 | 58.38%              |             |
| Apr-17                  | 14,143,681 | 26,084,473 | 54.22%              |             |
| May-17                  | 14,530,722 | 29,751,764 | 48.84%              |             |
| Jun-17                  | 13,684,827 | 30,527,004 | 44.83%              |             |
| Jul-17                  | 15,839,884 | 28,724,556 | 55.14%              |             |
| Aug-17                  | 15,272,413 | 31,216,785 | 48.92%              |             |
| Average (Sept - August) |            |            | 58.36%              |             |



# ATTACHMENT 2

# DMAFB Dry Weather Flow & County Peak Wet Weather Flow 2010-2016



—○— DMAFB Self-Reported Billed Discharge

◆ County Metered Peak Wet Weather Flow