Water Outlook

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Water Planning & Conveyance Supervisor

January 17, 2018
Water Outlook

• Current Situation Summary
  – Weather
    • In December, the temperature was above average, as measured at the airport.
    • Precipitation was well below average for the month at the airport.
    • Drought Monitor shows areas with dry conditions have continued to increase across Colorado.
  – System wide storage is at 84%.
  – As of Dec. 31, 2013 we are in Stage 1 Voluntary Restrictions.
Water Outlook

U.S. Drought Monitor

January 9, 2018
(Released Thursday, Jan. 11, 2018)
Valid 7 a.m. EST

Drought Impact Types:
- Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brian Fuchs
National Drought Mitigation Center

http://droughtmonitor.unl.edu/
Water Outlook

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for December 21 - March 31, 2018
Released December 21, 2017

Author:
Adam Sigal
NOAA/NWS/NCEP/Climate Prediction Center

http://go.usa.gov/3eZ73
Water Outlook

• Local Weather Conditions As of January 11, 2018
  – Precipitation (Inches of Moisture) 0.08 in. (72.7 % of normal)
  – Average Temperature (Degrees F) 35.9 Deg. (5.4 deg. above normal)

• Local Weather Conditions As of December 31, 2017
  – Precipitation (Inches of Moisture)
    • December 2017 0.01 in. (2.9% of normal)
    • 2017 Total 18.44 in. (111.5% of normal)
  – Average Temperature (Degrees F)
    • December 2017 33.7 Deg. (3.9 deg. above normal)
    • 2017 Average 52.2 Deg. (3.3 deg. above normal)
Water Outlook

• 2018 Demands
  – January 11, 2018 Averaged 44.2 MGD
    • About 5.0 % more than January 11, 2017

• 2017 Demands
  – 2017: Averaged 64.7 MGD, 23.615 BG total
    • About 0.2 % less than 2016
    • 50 Million Gallons less than 2016
Water Outlook

Total Annual Water Use

Billion Gallons

<table>
<thead>
<tr>
<th>Year</th>
<th>Water Use</th>
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<tbody>
<tr>
<td>2001</td>
<td>30.46</td>
</tr>
<tr>
<td>2002</td>
<td>27.37</td>
</tr>
<tr>
<td>2003</td>
<td>24.55</td>
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<td>2004</td>
<td>23.58</td>
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<td>2005</td>
<td>26.35</td>
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<tr>
<td>2015</td>
<td>23.62</td>
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<tr>
<td>2016</td>
<td>23.61</td>
</tr>
<tr>
<td>2017</td>
<td></td>
</tr>
</tbody>
</table>
Water Outlook

2017 Actual Production (Weekly Data)

<table>
<thead>
<tr>
<th></th>
<th>YTD Production as of December 31, 2017</th>
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<tbody>
<tr>
<td>AOFP Forecast</td>
<td>24,236 MG</td>
</tr>
<tr>
<td>Rev’d Forecast</td>
<td>22,934 MG</td>
</tr>
<tr>
<td>2017 Actual</td>
<td>23,657 MG</td>
</tr>
<tr>
<td>Average*</td>
<td>22,840 MG</td>
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</tbody>
</table>

YTD Weather as of December 31, 2017

<table>
<thead>
<tr>
<th></th>
<th>2017 Cum Precip</th>
<th>18.44 Inches</th>
<th>Percent of Normal</th>
<th>111 %</th>
<th>2017 Avg Temp</th>
<th>52.2 °F</th>
</tr>
</thead>
</table>
## Water Outlook

### Reservoir Levels
- **December 31, 2017**
  - Pikes Peak: 67%
    - 81-10 Avg.: 69%
  - Rampart: 75%
    - 81-10 Avg.: 73%
  - Local Total: 72%
    - 81-10 Avg.: 72%
  - System Total: 84%
    - 81-10 Avg.: 74%
Water Outlook

Storage on December 31 was about 84% of capacity

Note: Years of Demand lines are shown based on current calculation only and are not accurate for storage in previous years.
Water Outlook

Arkansas Basin S.W.E. 51% of Average
Water Outlook

Upper Colorado River Basin High/Low Snowpack Summary
Based on Provisional SNOTEL data as of Jan 11, 2018

- Current as Pct of Normal: 72%
- Current as Pct of Avg: 68%
- Current as Pct of Last Year: 47%
- Current as Pct of Peak: 35%
- Normal as Pct of Peak: 48%
- Pct of Normal Needed to Reach Peak: 125%
- Normal Peak Date: Apr 10

Colorado Basin S.W.E. 68% of Average
2017 Regional Water Contracts

- Donala Water & Sanitation District
  - Through December 31, 2017: Conveyed 422.4 AF for $1,600,816
  - Premium to Municipal Government: $266,803
- Security Water District
  - Through December 31, 2017: Conveyed 74.3 AF for $276,289
  - Premium to Municipal Government: $46,048
- Outside Service Area Augmentation Leases
  - PF, LLC (Seven Falls), Emerald Valley Ranch
    - Through December 31, 2017: Leased 17.8 AF for $8,357
    - Premium to Municipal Government: $1,393
- Total 2017 Revenue from Regional Contracts: $1,885,462
Water Outlook

- Operational Notes
  - Storage is currently at 84% of capacity.
- Situation Outlook Summary
  - The entire State is seeing some form of drought designation
    - Western portion is in D3 and El Paso County in D1
  - Currently have over 3 years of demand in storage.
    - Based on past 3 years unrestricted demand
  - We are monitoring snowpack, soil moisture and storage to maximize the available water supply.