Metro Atlanta and the US Drought Monitor

February 4, 2020

Katherine Zitsch, PE, BCEE
~80% of our Water Supply is from Corps Reservoirs and Related Rivers
Water Resources in Metro North Georgia

- The region is underlain by granite bedrock
- Groundwater use is limited
98% of Our Water is Supplied through Surface Water Sources
Cycles of Flood and Drought

Average Annual Rainfall = 50 inches

Annual Atlanta Rainfall (inches)
Drought Monitor Helps Us As An Education Tool

U.S. Drought Monitor

Georgia

January 28, 2020
(Released Thursday, Jan. 30, 2020)
Valid 7 a.m. EST

Intensity:
- None
- 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. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Richard Heim
NCEI/NOAA

droughtmonitor.unl.edu
And Helps Us See the Bigger Picture
... but the Drought Monitor Can Also Cause Its Own Challenges
Lake Lanier Watershed
Jan 2016 – Lake Lanier Above Full Pool

Lake Lanier Elevation 2016-2017

- 1071 - Full Summer Pool

- Elevation 2016 to 2017
- 1071-Full Summer Pool
Jan 2016 – Lake Lanier Above Full Pool

[Map of U.S. Drought Monitor for Georgia with data points and annotations]

Elevation 2016 to 2017

Lake Lanier Elevation 2016-2017

January 5, 2016
(Released Thursday, Jan. 7, 2016)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

<table>
<thead>
<tr>
<th>Date</th>
<th>00-04</th>
<th>05-06</th>
<th>07-08</th>
<th>09-11</th>
<th>12-14</th>
<th>15-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>87.36</td>
<td>12.64</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Last Week</td>
<td>87.36</td>
<td>12.64</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3 Months Ago</td>
<td>71.24</td>
<td>28.76</td>
<td>12.93</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Start of Calendar Year</td>
<td>87.36</td>
<td>12.64</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Start of Water Year</td>
<td>63.46</td>
<td>36.54</td>
<td>17.71</td>
<td>1.20</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>One Year Ago</td>
<td>95.16</td>
<td>4.84</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Exceptional Drought
- D4 Extreme 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/
Lake Lanier Elevation 2016-2017

April 2016
April 2016

U.S. Drought Monitor
Georgia

April 5, 2016
(Released Thursday, Apr. 7, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

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<thead>
<tr>
<th></th>
<th>D0</th>
<th>D0-D4</th>
<th>D1</th>
<th>D1-D4</th>
<th>D2</th>
<th>D2-D4</th>
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<th>D4</th>
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<tbody>
<tr>
<td>Current</td>
<td>81.27</td>
<td>18.73</td>
<td>0.09</td>
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<td>9.00</td>
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<tr>
<td>Last Week</td>
<td>81.67</td>
<td>18.33</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3 Months Ago</td>
<td>87.36</td>
<td>12.64</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
<td>9.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start of Calendar Year</td>
<td>87.36</td>
<td>12.64</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
<td>9.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start of Water Year</td>
<td>84.46</td>
<td>15.64</td>
<td>17.67</td>
<td>1.20</td>
<td>0.00</td>
<td>8.00</td>
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<tr>
<td>One-Year Ago</td>
<td>91.17</td>
<td>9.83</td>
<td>2.27</td>
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<td>0.00</td>
<td>8.00</td>
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</table>

Severity:
- Yellow: D0 Abnormally Dry
- Dark Orange: D1 Moderate Drought
- Light Orange: D1-D4 Moderate Drought
- Pink: D2 Severe Drought
- Red: D3 Extreme Drought
- Dark Red: D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for more detailed information.

Author:
Richard Tingnan
CPICNOAA/NWS/CEP

http://droughtmonitor.unl.edu/
June 2016
November 2016

Lake Lanier Elevation 2016-2017

1071 - Full Summer Pool
January 2017

Lake Lanier Elevation 2016-2017

1071 - Full Summer Pool
Lake Lanier Elevation 2016-2017

1071 - Full Summer Pool

Elevation 2016 to 2017

1071-Full Summer Pool
June 2017

Lake Lanier Elevation 2016-2017

U.S. Drought Monitor
Georgia

June 6, 2017
(Released Thursday, Jun. 8, 2017)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

<table>
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<tr>
<th></th>
<th>D0</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
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<tr>
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<td>21.10</td>
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<td>3 Months Ago 03-07-2017</td>
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<td>73.48</td>
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<td>Start of Water Year 06-01-2016</td>
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<td>84.63</td>
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<td>One Year Ago 06-06-2016</td>
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<td>35.29</td>
<td>27.96</td>
<td>4.96</td>
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Author:
Deborah Batteke
National Drought Mitigation Center

http://droughtmonitor.unl.edu/
July 2017

Lake Lanier Elevation 2016-2017

1071 - Full Summer Pool

Elevation 2016 to 2017

1071-Full Summer Pool
July 4, 2017
(Released Thursday, Jul. 6, 2017)
Valid 8 a.m. EDT

<table>
<thead>
<tr>
<th>Drought Conditions (Percent Area)</th>
<th>None</th>
<th>D0-D4</th>
<th>D1-D4</th>
<th>D2-D4</th>
<th>D3-D4</th>
<th>D4</th>
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<tr>
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<td>0.19</td>
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<tr>
<td>3 Months Ago 06-06-2017</td>
<td>1.09</td>
<td>98.91</td>
<td>20.94</td>
<td>15.05</td>
<td>4.16</td>
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<tr>
<td>Start of Calendar Year 01-01-2017</td>
<td>11.31</td>
<td>88.09</td>
<td>73.48</td>
<td>39.33</td>
<td>19.28</td>
<td>0.00</td>
</tr>
<tr>
<td>Start of Water Year 06-27-2016</td>
<td>35.37</td>
<td>64.63</td>
<td>45.84</td>
<td>34.50</td>
<td>14.97</td>
<td>1.59</td>
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<td>One Year Ago 07-05-2016</td>
<td>51.69</td>
<td>48.31</td>
<td>33.76</td>
<td>28.12</td>
<td>6.77</td>
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</tbody>
</table>

Intensity:
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Author:
David Simmeral
Western Regional Climate Center

http://droughtmonitor.unl.edu/
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... but the Drought Monitor Can Also Cause Its Own Challenges