2014 Water Use and Weather
January 26, 2015
2014 Pumping

Total Pumping = 2.45 Billion Gallons

1% over 2013 11% under 1992
2014 Pumping
Percentage of Total by Entity

- Moscow: 35%
- Pullman: 37%
- WSU: 19%
- UI Domestic: 6%
- Palouse: 3%

2014 Total: 2.45 Billion Gallons
2014 Pumping
Percentage Change from 1992

UI Domestic
-58%

Palouse
-30%

WSU
-23%

Moscow
5%

Pullman
6%

2014 Pumping
(% change from 1992)
- 2014 Pumping Exceeds 1992
- 2014 Pumping Less Than 1992
2014 Pumping

Percentage Change from 2013 By Month


- Mos
- Pal
- UI
- Pul
- WSU
- Tot

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2014 Pumping
Cumulative % Change from 2013 By Month
2014 Pumping
Cumulative % Change from 2013 By Month

Cumulative (running total) Pumping - All Entities
Percentage Change: 2014 Delta from 2013

JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC

-7.8%  -3.9%  -2.6%  -2.0%  -1.0%  0.7%  0.1%  1.2%  1.6%  1.3%  1.0%
2014 Pumping

Combined Pumping Targets

Combined Annual Pumping *
1992 - 2014
Millions of Gallons

* Moscow, Pullman, UI, WSU

125% Ceiling = 3,087 Million Gallons

1% Annual Increase

Annual Pumping
5 Year Running Average
1% Annual Increase
125% Ceiling
2014 Pumping

Entity Pumping Targets

Moscow

Pullman

UI

WSU
2014 Pumping
Percentage of Total by Month (All Entities)

Monthly Pumping - All Entities
Percentage of 2014 Total

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>JAN</td>
<td>6%</td>
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<tr>
<td>FEB</td>
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<tr>
<td>NOV</td>
<td>6%</td>
</tr>
<tr>
<td>DEC</td>
<td>5%</td>
</tr>
</tbody>
</table>
2014 Pumping

Monthly Pumping – All Entities

Monthly Pumping - All Entities
Millions of Gallons

Non-Baseline

Baseline
Baseline (≈ indoor) Pumping

Percentage Change 2013 - 2014

- 2014 Water Use Exceeds 2013
- 2014 Water Use Less Than 2013

2014 Baseline* Water Use (% change from 2013)
* - annualized Jan, Feb, Nov, Dec average

- WSU -7.1%
- Moscow -4.5%
- Pullman -2.4%
- UI -1.2%
- Palouse -0.1%
Non-Baseline (≈ outdoor) Pumping

Percentage Change 2013 - 2014

- Moscow: 18.9%
- WSU: 15.1%
- Pullman: 10.4%
- Palouse: 5.5%
- UI (rec): 5.3%

2014 Non-Baseline Water Use (% change from 2013)

- 2014 Water Use Exceeds 2013
- 2014 Water Use Less Than 2013
2014 Weather

Average Temperature

Moscow Monthly Average Temperature 1893 - 2014

Month
Daily Max. Temperature compared to 30 yr Average
2014 Weather
Precipitation

Moscow Monthly Precipitation
1893 - 2014

Month

Monthly Precipitation (in)

Moscow Monthly Precipitation
2014
2013
2012
Average

2014 Weather
Precipitation
2009 - 2014 Weather

Precipitation compared to 30 yr Average

[Graph showing monthly precipitation from 2009 to 2014, with bars indicating deviations from the 1971-2000 average.]
2013 - 2014 Irrigation Season Weather
Temperature compared to 5 yr Average

2013-2014 Moscow Monthly Mean Maximum Temperature
Departure from 2008-2012 Average
(degrees F)
- Hotter Than 2008-2012 Average
- Cooler Than 2008-2012 Average

April May June July August September
-0.3 4.0 2.8 4.3 0.7 -3.4 2.6 4.1 1.4 5.8 0.4 -0.8
2013 - 2014 Irrigation Season Weather
Precipitation compared to 5 yr Average

2013-2014 Moscow Precipitation
Departure from 2008 - 2012 Average (inches)
- Drier Than 2008-2012 Average
- Wetter Than 2008-2012 Average

April May June July August September April May June July August September

0.5 0.3 0.0 0.0 0.3 0.0
-1.6 -0.5 -0.1 -0.6 -1.2 -0.8

2013 2014

-2.0 -1.6 -1.2 -0.8 -0.4 0.0 0.4 0.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6 4.0
2014 Irrigation Season Weather
Temperature Change from 2013

2014 Moscow Temperature
Monthly Mean of Daily Maximum Temperature Change from 2013 (Degrees F)
- Hotter Than 2013
- Cooler Than 2013

- April: 2.8
- May: 0.1
- June: -1.4
- July: 1.5
- August: -0.3
- September: 2.6
2014 Irrigation Season Weather
Precipitation Change from 2013

April: -1.2 inches (Drier Than 2013)
May: 0.4 inches
June: -1.2 inches (Drier Than 2013)
July: 0.5 inches
August: 0.4 inches
September: -2.6 inches (Wetter Than 2013)
2014 Irrigation Season Weather

Pan Evaporation Change from 2013

2014 Moscow Pan Evaporation Change from 2013 (percentage)

- Evaporation Exceeds 2013
- Evaporation Less Than 2013

April: -3.3%
May: -11.4%
June: -19.1%
July: -12.4%
August: -7.5%
September: 12.8%