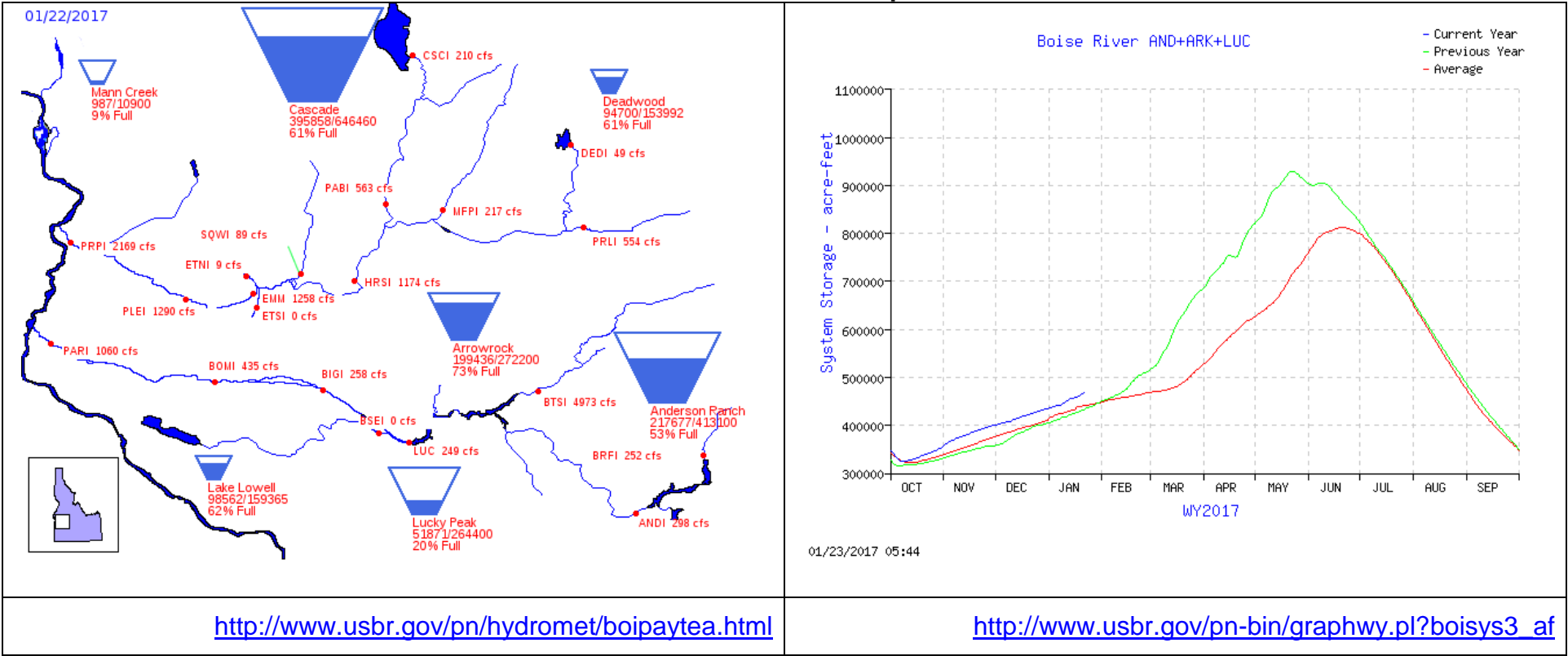


Boise System Review
For the Week of
January 23, 2017
Boise River Teacup



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 49% of capacity.
Total space available: 480,716 AF
Total storage capacity: 949,700 AF
Natural Flow: 1,056 CFS

Idaho SNOTEL Snow/Precipitation Update Report
Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, January 23, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	20.7	16.8	123	24.8	20.0	124
Bogus Basin	6340	17.0	14.2 _c	120	16.9	14.2 _c	119
Camas Creek Divide	5710	12.2	7.8 _c	156	16.1	11.3 _c	142
Dollarhide Summit	8420	-M	N/A	*	-M	15.8	*
Graham Guard Sta.	5690	11.2	8.5	132	20.4	14.2	144
Jackson Peak	7070	17.9	16.2	110	24.9	20.0	124
Mores Creek Summit	6100	22.0	17.5	126	26.9	22.2	121
Prairie	4800	8.5	4.0	212	11.5	9.4	122
Trinity Mtn.	7770	24.3	22.1	110	30.6	24.3	126
Vienna Mine	8960	22.6	18.0	126	26.6	18.3	145
Basin Index (%)		125			129		

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

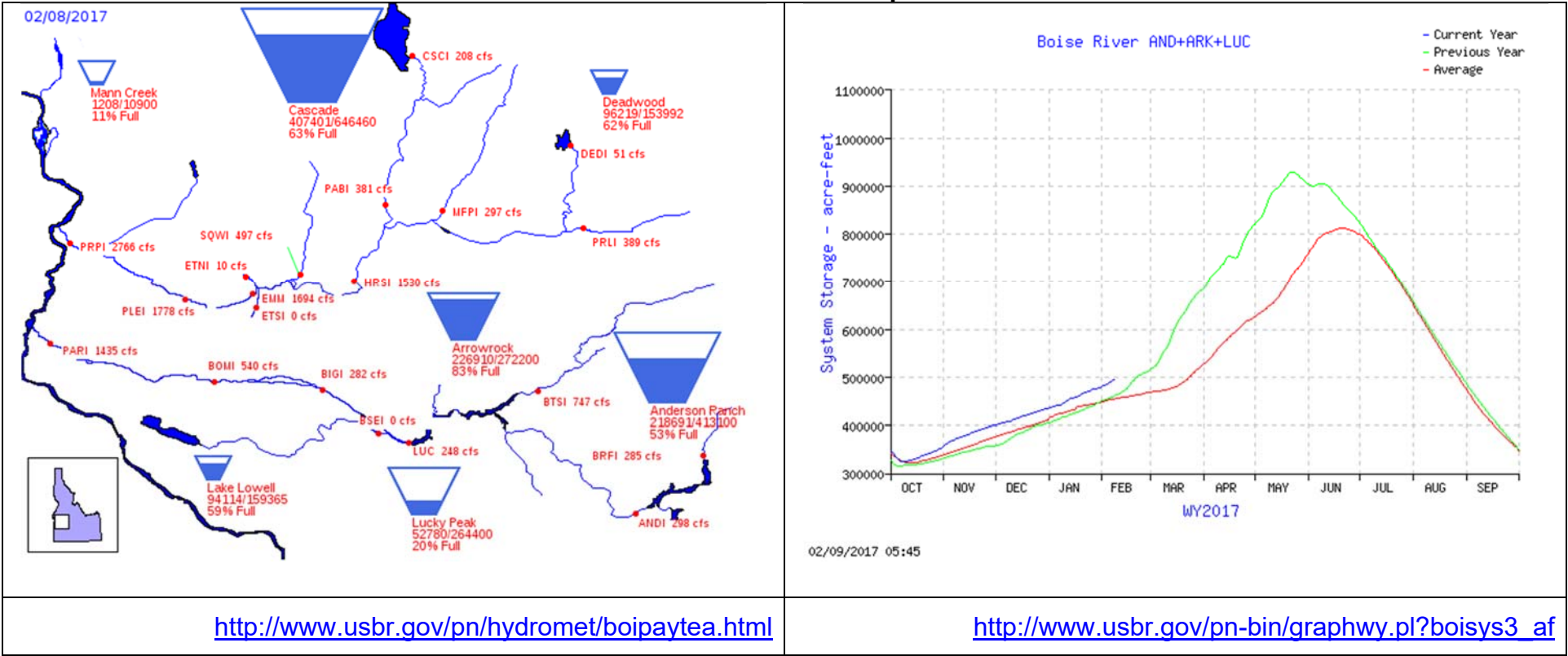
Reservoir storage is within a whisker of being half-full. While we seem to be getting more than our share of precipitation in the Valley at almost three times normal for this date in January, the Surface Water Supply Index for the first part of the month predicts a slightly above Near Normal Water Supply for the year.

In the spirit of recent events, this inaugural edition of the 2016-2017 Runoff Report sports what some can only regard as an “Alternative Fact.” Note that in the Teacup (upper left), the Twin Springs gage (BTST) reads nearly 5,000 cfs, which is likely an artifact of chilly temperatures as opposed to the response of a ragin’ river. “Alternative Facts” – they’re everywhere!

Stay tuned.

Steve

Boise System Review
For the Week of
February 6, 2017
Boise River Teacup



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 52% of capacity.
Total space available: 451,319 AF
Total storage capacity: 949,700 AF
Natural Flow: 1,899 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Thursday, February, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	28.9	19.9	145	31.1	22.7	137
Bogus Basin	6340	20.6	16.2C	127	19.6	16.2C	121
Camas Creek Divide	5710	15.2	9.7C	157	18.7	12.8C	146
Dollarhide Summit	8420	25.2	N/A	*	23.7	18.0	132
Graham Guard Sta.	5690	15.8	10.0	158	25.0	16.0	156
Jackson Peak	7070	24.8	18.6	133	31.4	22.8	138
Mores Creek Summit	6100	30.6	20.9	146	34.9	25.1	139
Prairie	4800	9.2	4.5	204	13.8	10.7	129
Trinity Mtn.	7770	33.8	25.5	133	40.0	27.4	146
Vienna Mine	8960	31.0	20.6	150	34.3	21.0	163
Basin Index (%)		144			141		

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Well, folks,

It's been pretty quiet out there – just the constant murmur of snowflakes piling up - way up in the hills. Since our last visit (1/23), the snow pack has make a nice run and has accumulated an additional 10% over the average snow water equivalent and precipitation figures for this time of the year. (We've gone from~130% to 140+%.) That pesky blue line in the upper right plot (this year's system storage) has started a wee bit of a divergence from the 30-year average (red line), and to top it off, the weather wizards are calling for a potential dump (1 to 1½ of precipitation) in the next couple of days. Nothing to get too worked up over, but those that pull the levers and turn the gates on the flood control structures are now paying a little closer attention to the Boise Basin. However, at ~140% of average, we shouldn't get too full of ourselves, especially when the upper Snake (above Palisades *and* above American Falls are sitting at ~160+%).

After a false alarm earlier today ("The water's going up on Friday!"), cooler heads finally prevailed. As of late-pm today, the River Dude is now calling a 500 cfs bump on Saturday, followed by an additional 500 cfs bump each day through Wednesday, putting the Glenwood gage at around 2,750 cfs by Wednesday afternoon on the upper river. Flows can be anticipated to be higher than that down at Parma.

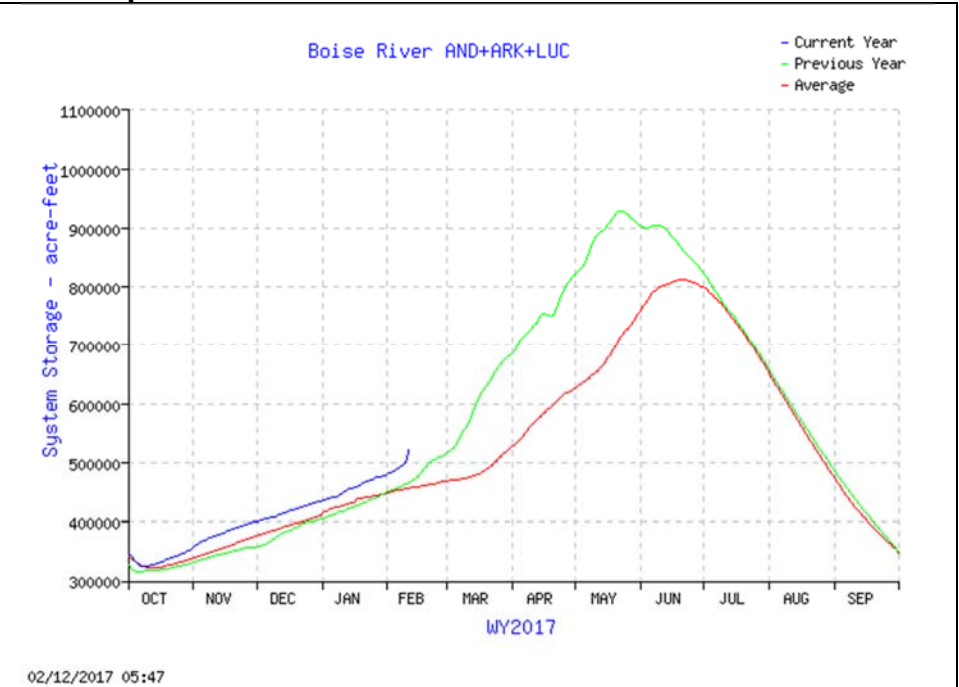
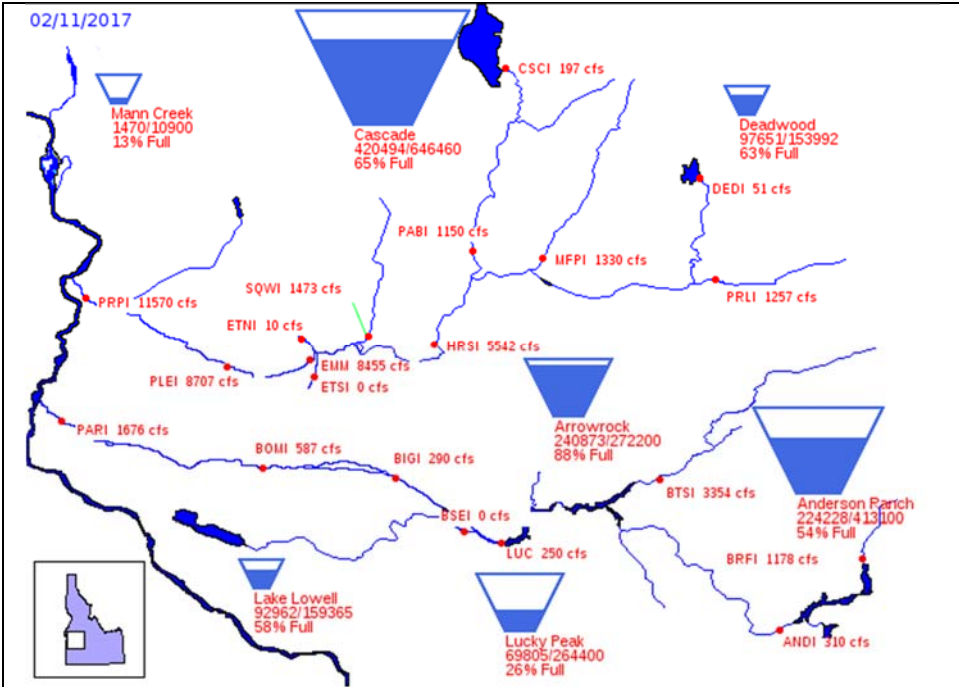
This one day delay in bumping the river will give some fellows time to finish off their trash racks and pull their channel maintenance equipment out of harm's way. However, there are some rumblings that the trolls working under a high bridge are preparing to stand fast and continue their valiant efforts – Talley-Ho!. Good for them!

That's all the news for now. This might be an interesting season after all.

Stay tuned.

Steve

Boise System Review
For the Week of
February 13, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 56% of capacity.
Total space available: 414,794 AF
Total storage capacity: 949,700 AF
Natural Flow: 6,921CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, February 12, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	29.7	20.3	146	35.2	23.1	152
Bogus Basin	6340	20.0	16.7C	120	20.2	16.4C	123
Camas Creek Divide	5710	14.2	9.8C	145	20.0	13.0C	154
Dollarhide Summit	8420	27.8	N/A	*	24.7	18.3	135
Graham Guard Sta.	5690	-M	10.3	*	26.9	16.2	166
Jackson Peak	7070	24.7	19.5	127	32.9	23.2	142
Mores Creek Summit	6100	29.6	21.9	135	37.3	25.5	146
Prairie	4800	8.4	4.5	187	14.4	10.8	133
Trinity Mtn.	7770	35.8	26.4	136	42.5	28.0	152
Vienna Mine	8960	34.3	20.8	165	34.9	21.4	163
Basin Index (%)		141			148		

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Well, folks,

We’re still staying ahead of the precipitation curve over 140 % of normal. 2017 has all the makings of a good water year, if someone doesn’t turn off the spigot and leave us high & dry in the short-term.

After a few fits and starts last week, the signs point to an increase in river flows beginning Monday. Ada County’s “Chief Worrier-In-Chief” forwarded the following on Friday afternoon:

All,
USACE Water Management is assuming control of releases from Lucky Peak Dam for spring flood control starting on February 13th, 2017. On February 13th, 2017 at 08:00 am discharge from Lucky Peak will increase from 250 cfs to 750 cfs. Our current plan is to make additional increases of 500 cfs each on February 15th and 16th. All flow changes for Lucky Peak will be issued by USACE Water Management office until further notice.

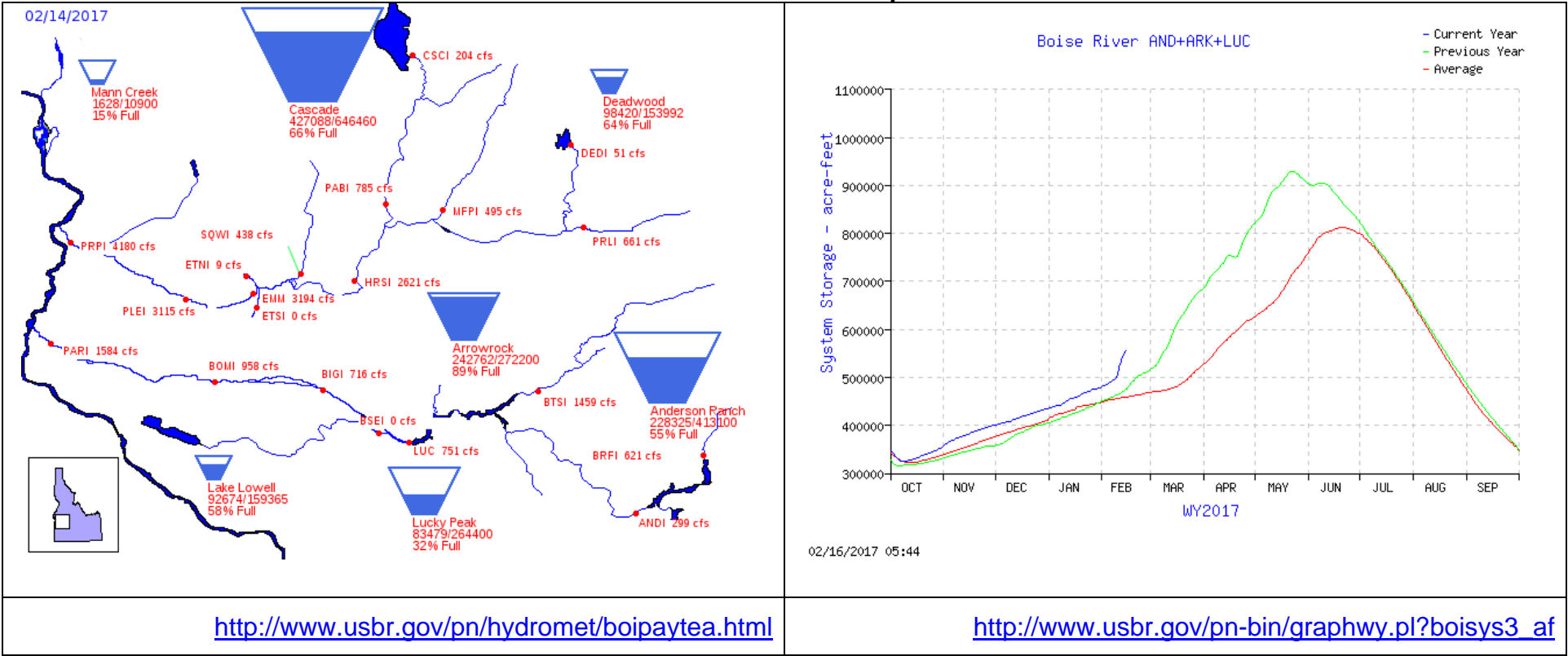
The pesky blue line in the graph of Boise System storage plot (upper right graph above) took an abrupt turn to the north last week, as the reservoir inflow tripled to nearly 7,000 cfs and the overall reservoir capacity filled by 4 percent over the week. This abrupt divergence from the 30-year redline average is the sort of thing that gets folks’ attention.

Word on the street is that we all ought to be expecting flood control operations to extend for a good spell this year. Going out on a limb here - and wholly independent of our on-going spill-refill arguments - based on the current travails the Acting Director of the CA Dept. of Water Resources is experiencing (<http://tinyurl.com/hamxuqe>), we should all anticipate that the dam safety folks are going to be a little nervous and flood control operations will be pretty conservative this season.

Stay tuned.

Steve

Boise System Review
For
February 16, 2017
Boise River Teacup



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 58% of capacity.
Total space available: 395,134 AF
Total storage capacity: 949,700 AF
Natural Flow: 3,090CFS

Idaho SNOTEL Snow/Precipitation Update Report
Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Thursday, February 16, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	31.1	21.0	148	35.6	24.1	148
Bogus Basin	6340	20.0	17.4C	115	20.3	17.0C	119
Camas Creek Divide	5710	14.1	10.1C	140	20.0	13.2C	152
Dollarhide Summit	8420	28.3	N/A	*	25.0	19.0	132
Graham Guard Sta.	5690	-M	10.8	*	-M	16.9	*
Jackson Peak	7070	24.6	20.8	118	34.0	24.1	141
Mores Creek Summit	6100	29.5	23.5	126	37.4	26.3	142
Prairie	4800	6.6	4.7	140	14.8	11.2	132
Trinity Mtn.	7770	36.4	27.9	130	42.4	29.3	145
Vienna Mine	8960	34.6	21.7	159	35.0	22.0	159
Basin Index (%)		134			142		

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

The pesky blue line in the graph of Boise System storage plot (upper right graph above) took an abrupt turn to the north last week, as the reservoir inflow tripled to nearly 7,000 cfs and the overall reservoir capacity filled by 4 percent over the week. This abrupt divergence from the 30-year has got folks’ attention. The USACE has assumed control of flood control operations for the Boise River.

Here’s the latest word on the street (USACE):
On Thursday 16 February at 08:00 releases will increase to 1750 cfs.

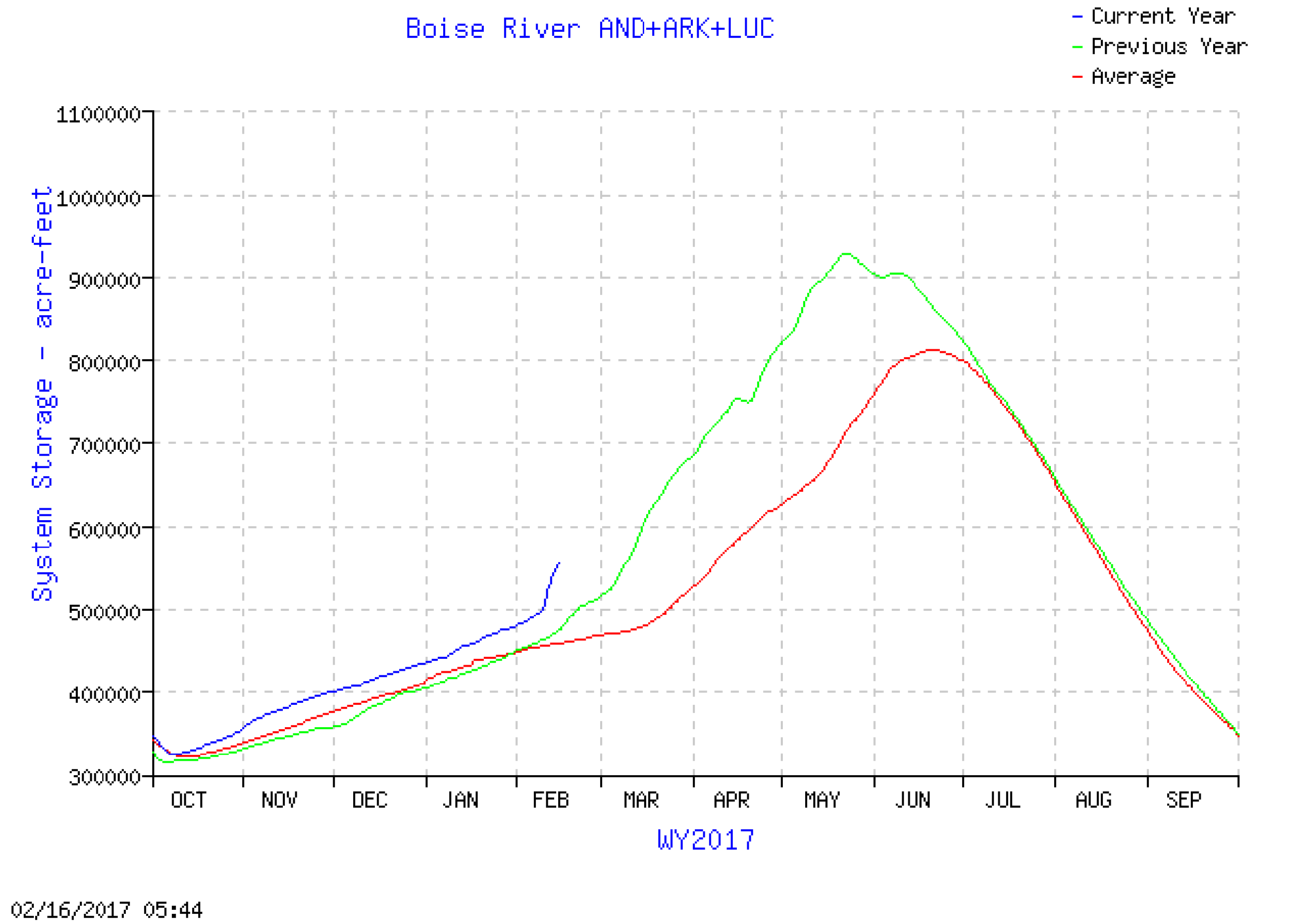
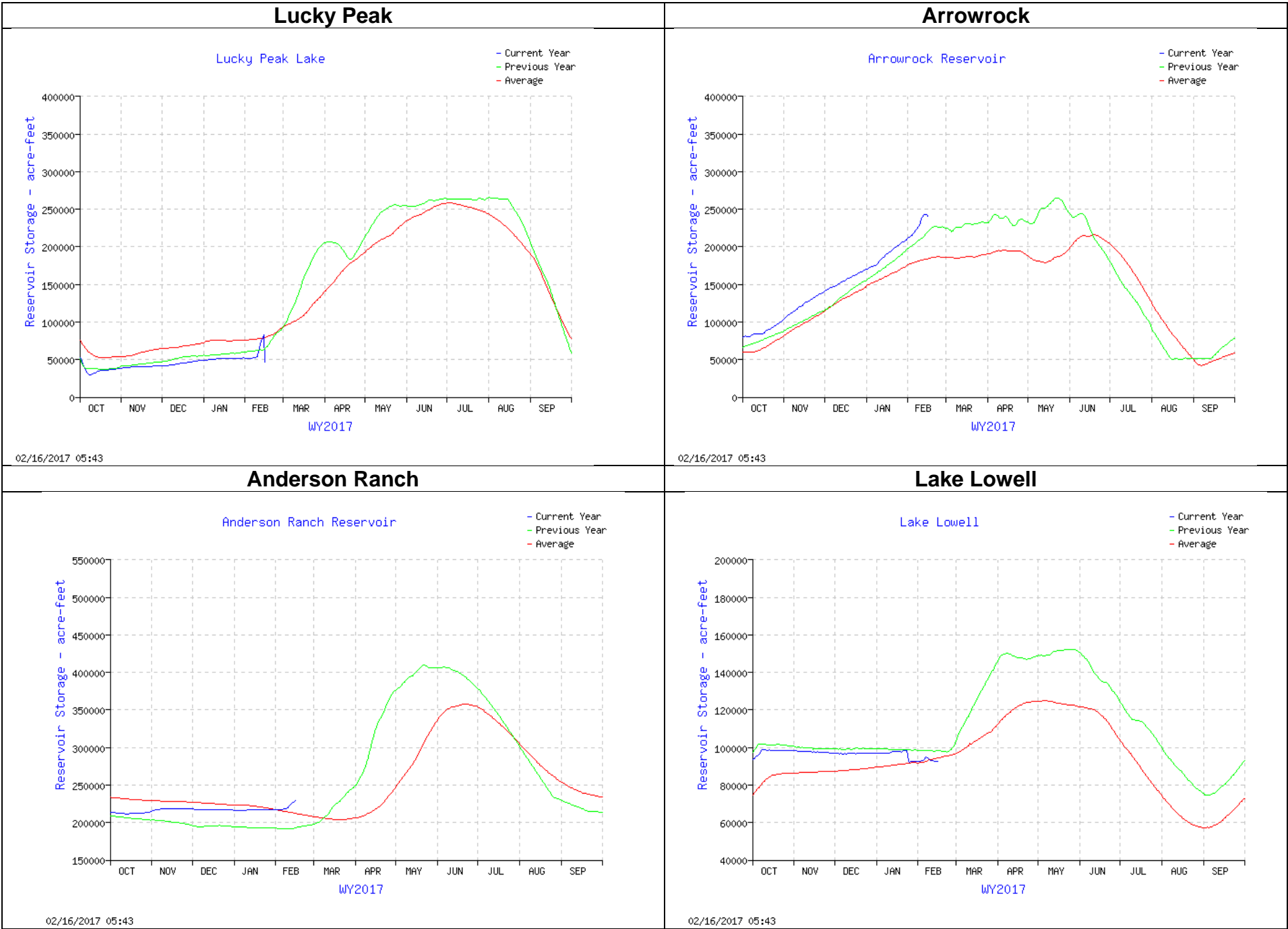
On 17 February at 08:00 releases will increase to 2250 cfs.

All times are MST. These operations are subject to change. Thanks for your time and attention. Have a great day. 😊

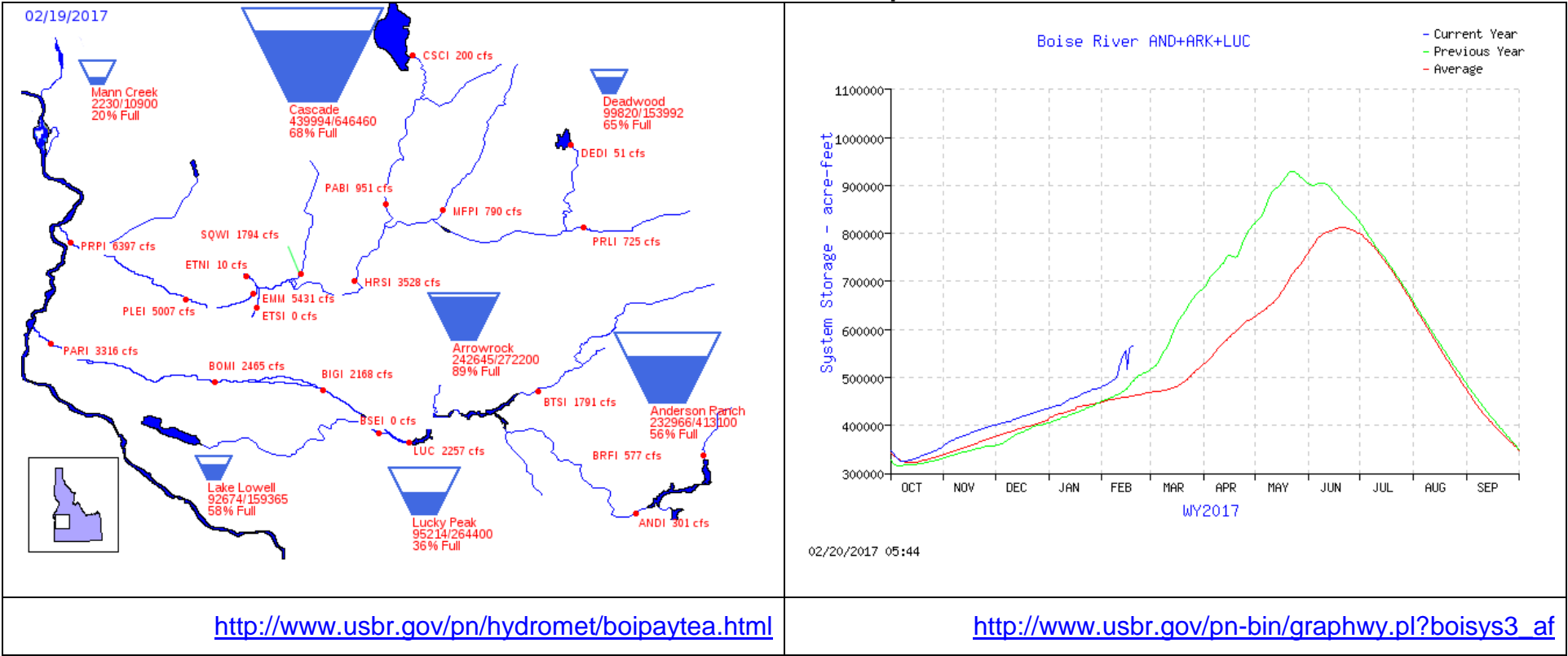
By all indications (informal), by the end of next week the River will be to 4,000 cfs. Pending a shut-off of Mother Nature’s spigot, one should expect high flows to keep up until irrigation season.

Stay tuned.

Steve



Boise System Review
For the Week of
February 20, 2017
Boise River Teacup



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 60% of capacity.
Total space available: 378,8754 AF
Total storage capacity: 949,700 AF
Natural Flow: 4,670CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, February 20, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	34.7	21.8	159	36.0	25.1	143
Bogus Basin	6340	21.9	17.7C	124	22.1	17.3C	128
Camas Creek Divide	5710	15.8	10.5C	150	21.0	13.6C	154
Dollarhide Summit	8420	31.4	N/A	*	25.5	19.9	128
Graham Guard Sta.	5690	-M	11.1	*	-M	17.6	*
Jackson Peak	7070	26.7	21.7	123	35.8	25.1	143
Mores Creek Summit	6100	31.2	24.2	129	38.2	27.2	140
Prairie	4800	8.1	4.8	169	15.7	11.6	135
Trinity Mtn.	7770	40.4	29.0	139	42.2	30.6	138
Vienna Mine	8960	37.8	23.1	164	34.8	23.0	151
Basin Index (%)		142			140		

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Well, folks,

We remain ahead of the precipitation curve over 140 % of normal. There’s apparently a solid water year on the horizon.

In recognition of President’s Day, the River Dude forwarded Walla2’s most recent post from early Saturday evening:

Good Afternoon All,
Release from Lucky Peak are increasing from 2250 cfs to 2750 cfs on Monday 20 February at 08:00.
Due to this weekend additional snow fall and weather event:
On Tuesday 21 February at 08:00 releases will increase from 2750 to 3250 cfs. As previously scheduled and
On Tuesday 21 February at 12:00 releases will increase from 3250 to 3750 cfs.
All times are MST. These operations are subject to change and further increases are likely.

So, while the river’s been bumping up 500 cfs with each prior increase; starting Tuesday, we’ll be seeing our first daily bump of 1,000 cfs. On top of that, we’re being advised that change is in the air and further increases are on the horizon.

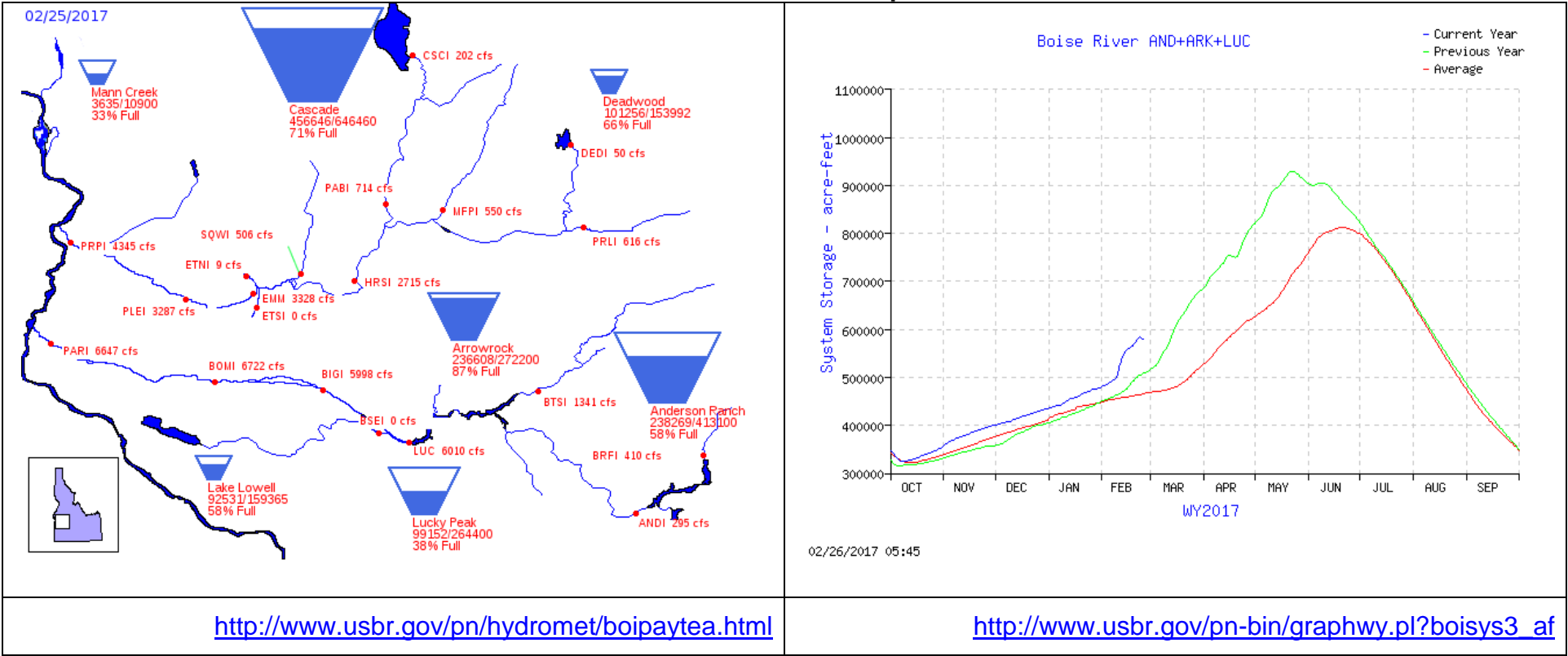
The pesky blue line in the graph of Boise System storage plot (upper right graph above) continues upward, although not as fast as the past few weeks. Inflows have dropped back to 4,700 cfs from the prior 7,000. Still, the overall reservoir capacity filled by another 4 percent over the week. This continued divergence from the 30-year redline average is likely weighing on the minds of those pulling the levers on the system.

Sounds as though the last of the in-channel activities heading into flood season has likely wrapped up, as the W4 Group (“Water Wing Wonder Workers,” formerly the “HBT Team”) concluded late last week that preparing for marine welding and use of the Tremie method would take a little more time than they had available at that particular instant.

Stay tuned.

Steve

Boise System Review
For the Week of
February 27, 2017
Boise River Teacup



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 60% of capacity.
Total space available: 375,671 AF
Total storage capacity: 949,700 AF
Natural Flow: 3,319 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, February 26, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	38.3	23.1	166	-M	26.4	*
Bogus Basin	6340	23.5	19.5C	121	23.8	18.2C	131
Camas Creek Divide	5710	16.5	10.9C	151	22.4	14.1C	159
Dollarhide Summit	8420	34.9	N/A	*	-M	20.9	*
Graham Guard Sta.	5690	16.6	11.6	143	30.4	18.2	167
Jackson Peak	7070	28.7	22.1	130	36.9	26.3	140
Mores Creek Summit	6100	32.4	25.7	126	40.6	28.6	142
Prairie	4800	8.2	4.9	167	16.6	12.2	136
Trinity Mtn.	7770	44.2	30.2	146	-M	31.9	*
Vienna Mine	8960	41.6	24.5	170	-M	24.2	*
Basin Index (%)		145			145		

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

For an interesting observation on the Boise Basin 2017 Snowpack Comparison check out this site:
https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/basinsweplots/id/boise_swe_d.gif
According to the NRCS data, we’re presently 26% ahead of the normal peak, which historically occurs on April 3, a full 5 weeks out.

Well, folks,

Good news, our watershed precipitation has moved from 140% to 145% of normal. An optimistic plentiful water year remains on our horizon.

We’re closing out February running just below the Boise River’s 6,500 cfs “Regulatory Objective.” With 3,300 cfs coming in and 6,000 cfs going past Lucky Peak’s turbines, that pesky blue line in the upper right graph has finally turned south! However, with just a single southward turn, we’re not hearing anyone say we’re out of the woods quite yet.

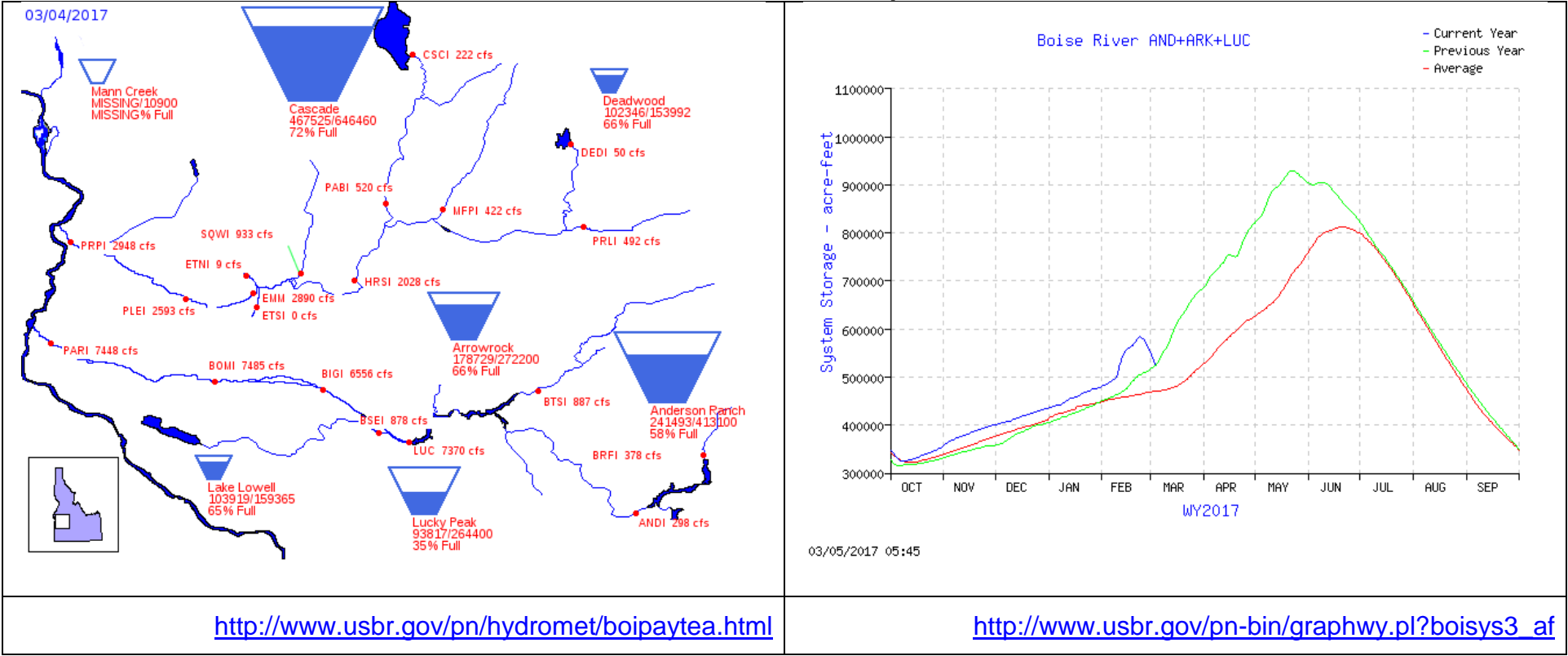
This week, water managers will start moving water into Lake Lowell through the New York Canal. With 67,000 ac-ft of capacity, Lake Lowell could swallow 750 cfs per day between now and irrigation season and top out.

The pertinent data from the water managers in Walla2’s latest report (Feb 20) follows:
Releases from Lucky Peak are increasing 400 cfs from 6000 cfs to 64000 cfs (Aside: We’re all betting the farm that 64,000 was really a typo and they meant 6,400) on Monday 27 February at 09:00 and up another 200 cfs to 6600 at 10:00 to match irrigation diversions to Lake Lowell.
All times are MST. These operations are subject to change and further increases are possible.

Note: “Further increases are possible.” Stay tuned.

Steve

Boise System Review
For the Week of
March 6, 2017
Boise River Teacup



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 54% of capacity.
Total space available: 435,661 AF
Total storage capacity: 949,700 AF
Natural Flow: 2,409 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, March 6, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	39.7	24.0	165	-M	27.6	*
Bogus Basin	6340	25.6	22.2C	115	25.0	19.0C	132
Camas Creek Divide	5710	17.4	11.6C	150	22.8	14.5C	157
Dollarhide Summit	8420	36.1	N/A	*	-M	21.9	*
Graham Guard Sta.	5690	-M	12.2	*	-M	18.8	*
Jackson Peak	7070	30.0	22.6	133	37.6	27.5	137
Mores Creek Summit	6100	34.3	26.5	129	42.9	29.7	144
Prairie	4800	-M	4.9	*	17.1	12.7	135
Trinity Mtn.	7770	46.2	31.1	149	-M	33.2	*
Vienna Mine	8960	43.5	25.5	171	-M	25.2	*
Basin Index (%)		145			141		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

For an interesting observation on the Boise Basin 2017 Snowpack Comparison check out this site:

https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/basinsweplots/id/boise_swe_d.gif

According to the NRCS data, we’ve now moved to 29% ahead of the normal peak, which historically occurs on April 3 - another 4 weeks out.

Well, folks,

Good news, our watershed snow-water equivalent remains at 145% of normal, and there’s still some more in the forecast for this next week.

We closed out February by running at the Boise River’s 6,500 cfs “Regulatory Objective,” and that pesky blue line is getting closer to getting below the red-line, but not quite there yet. (Note, prior commentary re: the blue line was in error & we’ve still got a ways to go.) The ramp-up in river flows has provided 60,000 ac-ft of additional storage compared to the prior week. Storage availability improved by 6% in a week and is currently standing at 54%. Since last week’s visit, system inflows have dropped 50% to 2,400. With 2,400 cfs coming in and 7,400 cfs flowing past Lucky Peak’s turbines – that’s a net of over 10,000 ac-ft per day of water moving out of the reservoir system & down to Astoria. But - and there seems to always be a “but” - next week flows are heading up another 500 cfs to “Flood Stage” (7,000 cfs at Glenwood), for the first time since 2012. Apparently, the fellows in control of the river decide that they’re going to need a little more room the system.

Water managers started moving water into Lake Lowell through the New York Canal. Last week, the Lake Lowell increased 6,000 ac-ft. Check out the following page and one can observe that the bulk of the water came out of Arrowrock Reservoir. Interesting movement of water

As Ada County’s Chief Worrier-In-Chief was heading out of town to warmer climes, in the spirit of our Commander-In-Chief, he tweeted:

Releases from Lucky Peak are increasing 250 cfs from 7,350 cfs to 7,600 cfs on Monday 6 March at 08:00. We expect Glenwood Bridge Flows to be 6,750 cfs subsequent to this change.

Releases from Lucky Peak will be increased an additional 250 cfs from7,600 cfs to 7,850 cfs on Tuesday 7 March at 08:00. The flow at Glenwood Bridge will increase to 7,000 cfs.

All times are MST. These operations are subject to change and further increases are possible.

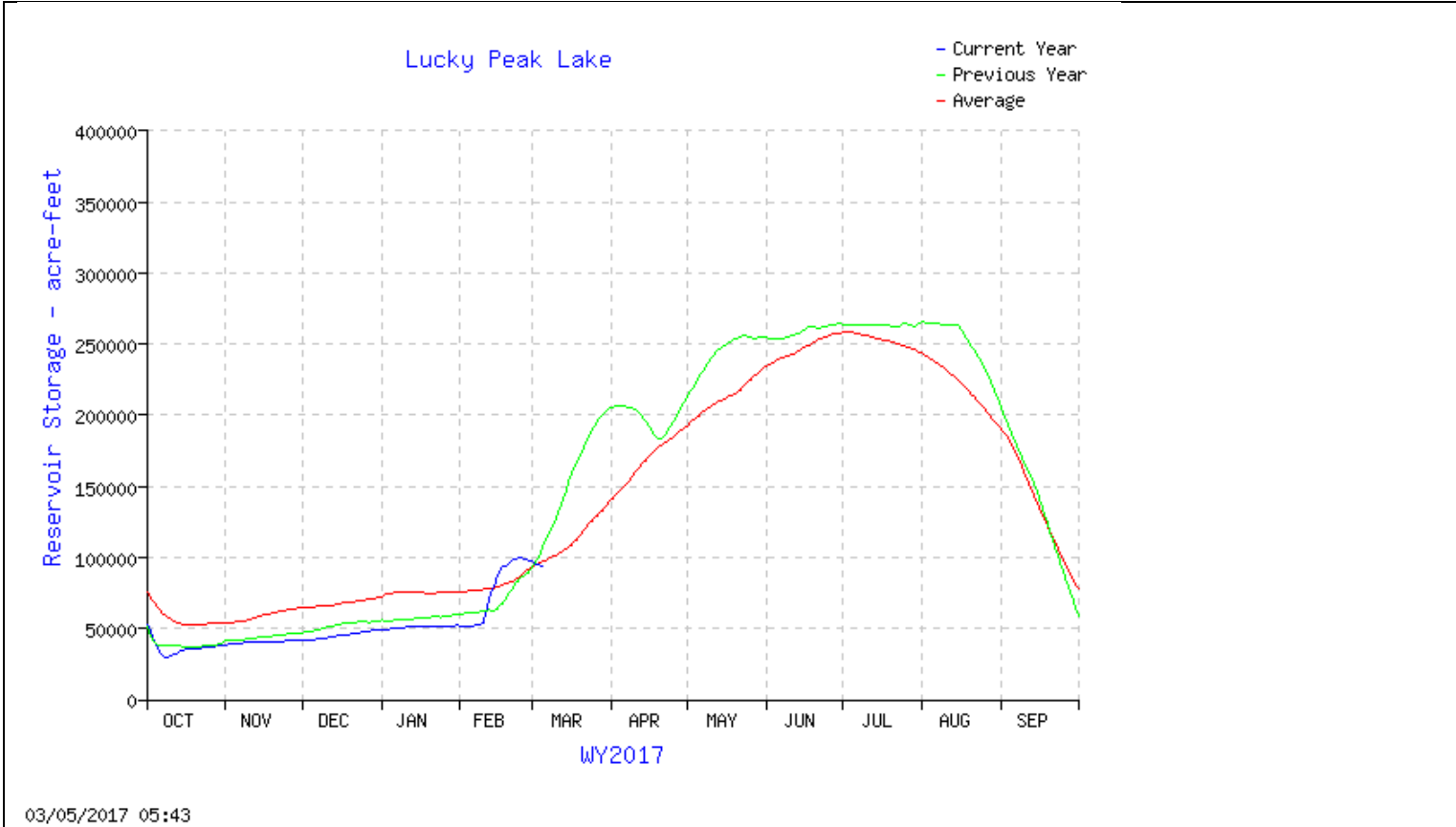
Note: “Further increases are possible.”

Thank God, the RiverDude is reported to be heading back to take control (Shades of Al Haig: <http://tinyurl.com/zqp2lqy>). Otherwise, we might be in tough shape with the current situation and both the Chief Worrier-In-Chief and RiverDude out of town & on the lam.

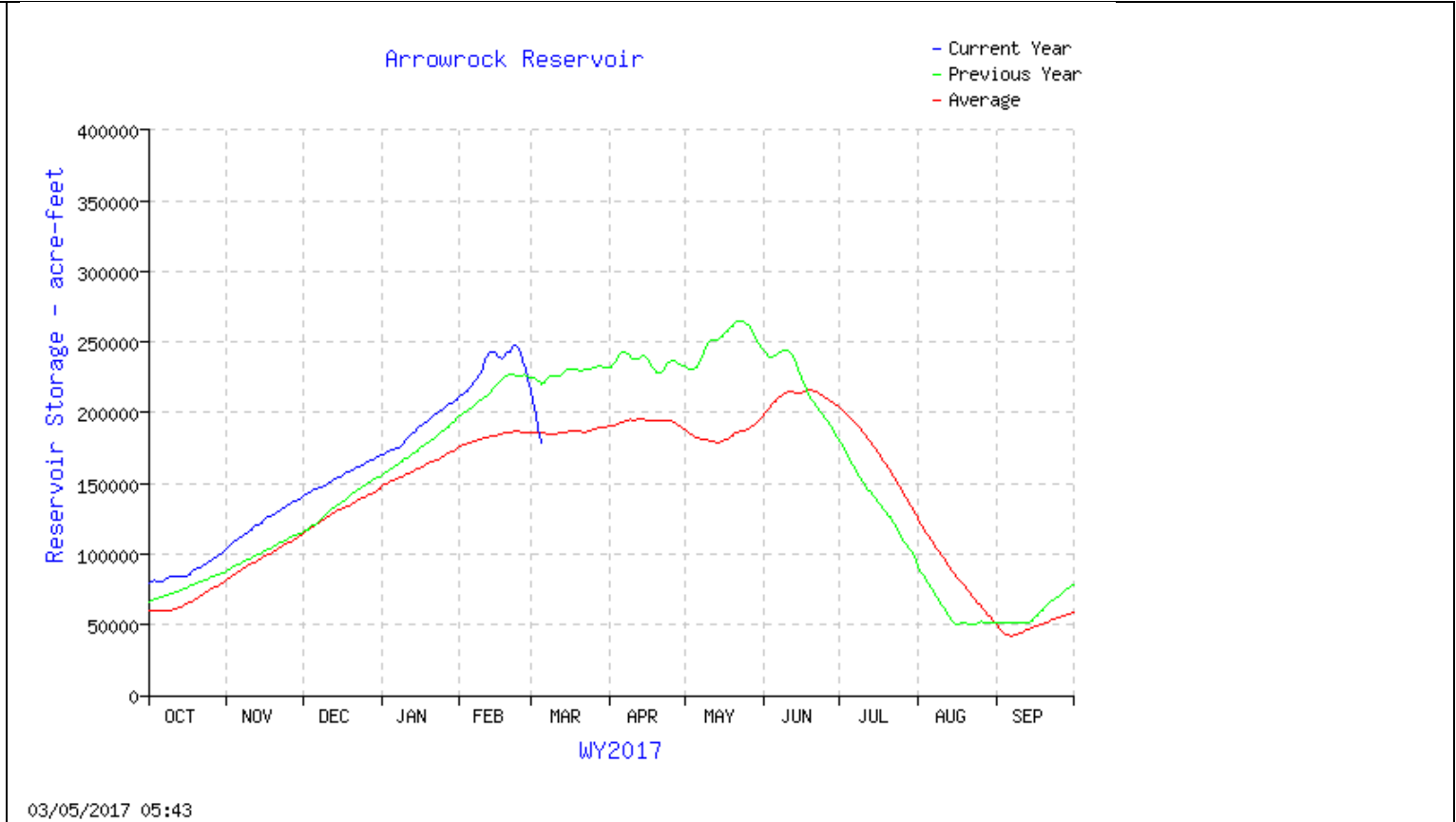
One more thing, in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve

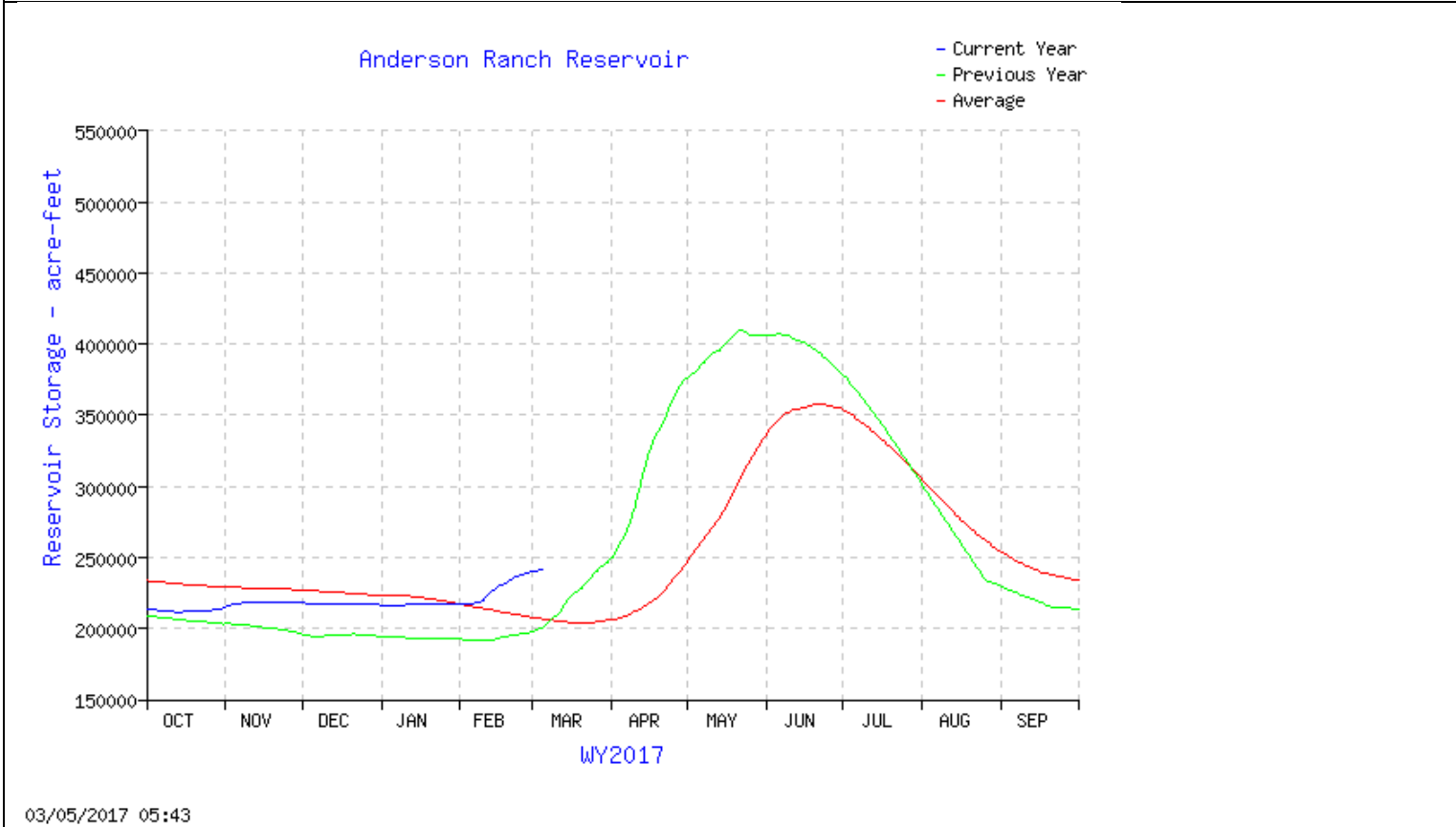
Current and Previous Copies of the Boise System Review are here: <http://www.quadrant.cc/runoff-review.html>



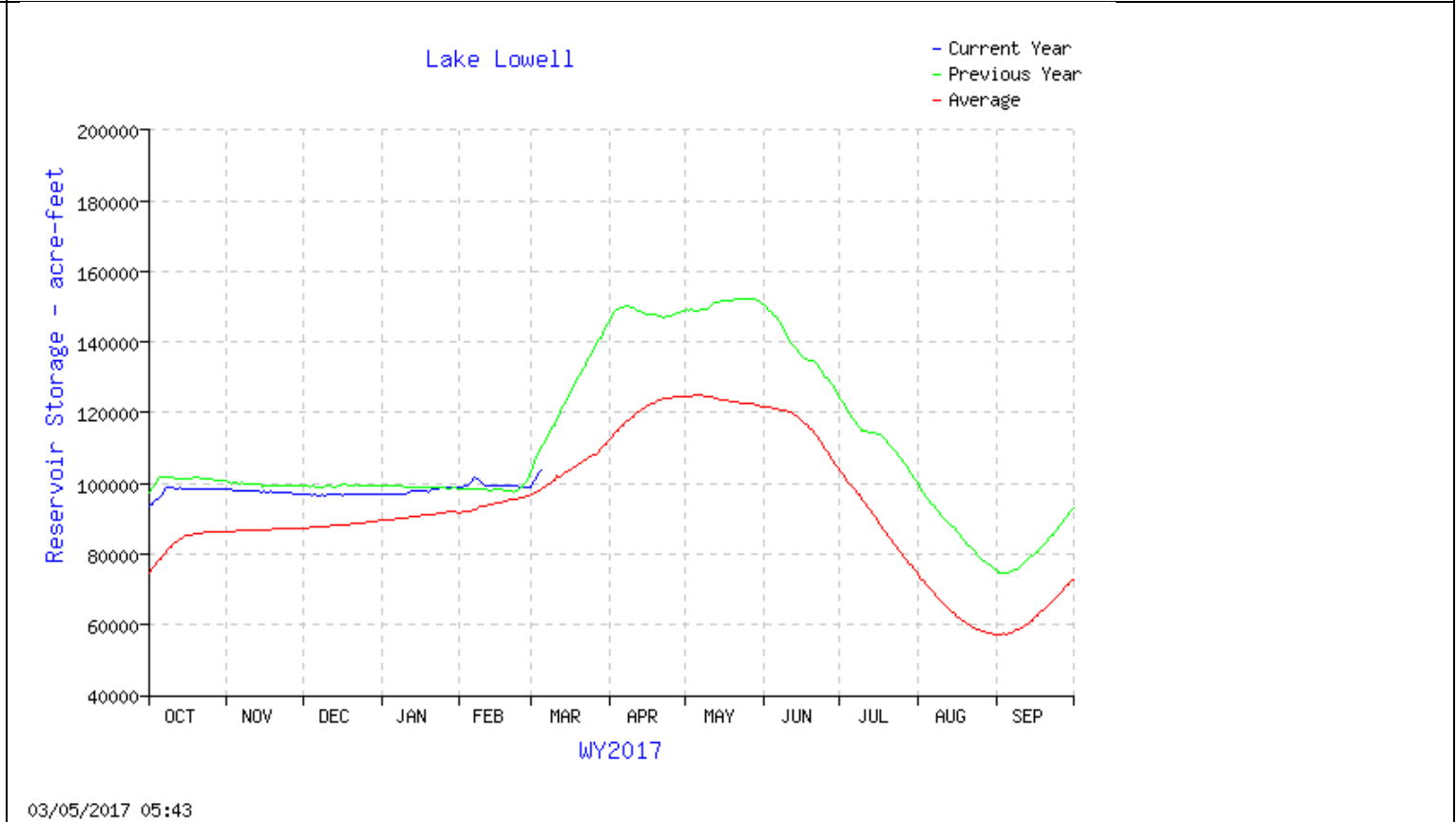
Lucky Peak. In the last week, overall storage was slightly down.
Note: “kaf” denotes “1,000 acre-ft.”



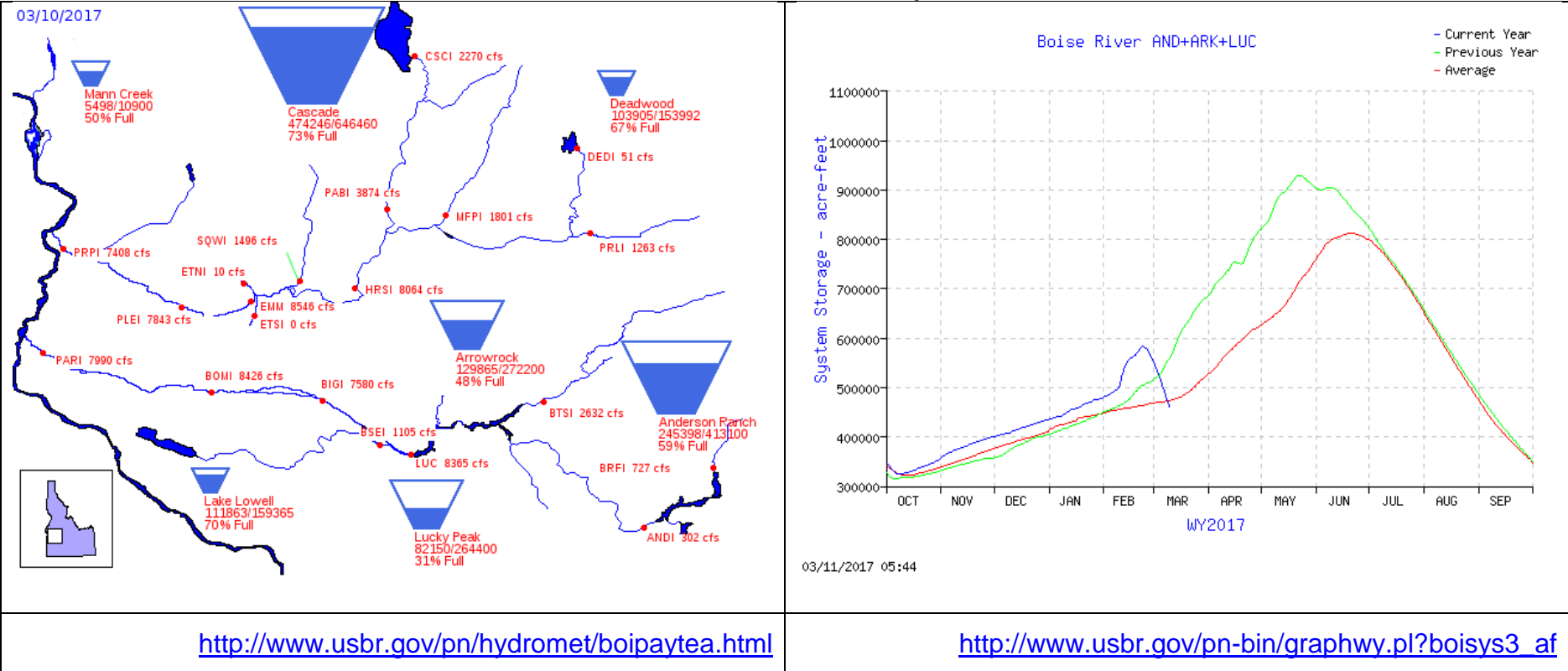
Arrowrock. The bulk of the water moved out of the system was clearly out of this reservoir, approximately 75 kaf.



Anderson Ranch. This reservoir gained a little over 20 kaf in the last week.



Lake Lowell. With water moving into the New York Canal, this reservoir increased ~6 kaf



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 49% of capacity.
Total space available: 488,634 AF
Total storage capacity: 949,700 AF
Natural Flow: 3,206 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Saturday, March 11, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	41.4	25.2	164	46.5	28.5	163
Bogus Basin	6340	26.8	22.6C	119	27.4	19.7C	139
Camas Creek Divide	5710	17.6	11.8C	149	24.0	14.8C	162
Dollarhide Summit	8420	38.4	N/A	*	-M	22.8	*
Graham Guard Sta.	5690	18.1	12.7	143	34.9	19.3	181
Jackson Peak	7070	33.4	23.2	144	39.0	28.4	137
Mores Creek Summit	6100	39.5	27.2	145	48.6	30.9	157
Prairie	4800	8.2	4.0	205	18.5	13.1	141
Trinity Mtn.	7770	48.9	31.5	155	-M	34.4	*
Vienna Mine	8960	47.2	26.8	176	-M	26.3	*
Basin Index (%)		152			154		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

For an interesting observation on the Boise Basin 2017 Snowpack Comparison check out this site:

https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/basinsweplots/id/boise_swe_d.gif

According to the NRCS data, we’ve now moved to 45% ahead of the normal peak, which historically occurs on April 3 - another full 3 weeks out.

Well, folks,

Good news, our watershed snow-water moved up 7 percentage points to 152% of normal, since earlier in the week.

Contrary to earlier euphoric reports that erroneously called the event early, as of yesterday the pesky blue line (current reservoir storage) finally pierced the red line (30-year historic average of reservoir storage). The relatively early releases this year unloaded another 55 thousand acre-feet (kac-ft) out of the system, leaving nearly 490 kac-ft of storage available in reservoir capacity (49%). Meanwhile, the NRCS’s March 1 Streamflow Forecasts is calling for nearly 2,500 kac-ft of runoff out of the Boise in March-July (range 2,140 – 2,750), where the 30-yr average is 1,430. The underlying message is that we’re going to need to run approximately 2,500 kac-ft through a 500 kac-ft bag in the next few months. That’ll be more than we’re accustomed to seeing. Now that the recent rain has dogged off and the sun has come out, inflow into the system bumped up 50% from 2,400 cfs to 3,200. Increased inflow will add just a wee bit more pressure on our reservoir bag.

This last week flows on the Boise, as measured at Glenwood, eased into the official NWS “Flood Stage,” when the 7,000 cfs marker was crossed on Tuesday. Since crossing the official threshold, flows have been steadily increasing to the 7,500 cfs range we’re seeing today. The last time we saw flows this high was in May of 2012. Hmmmm.....

Water managers continued moving water into Lake Lowell through the New York Canal. Last week, the Lake Lowell increased 7.5 kac-ft. If the irrigators weren’t taking that water, that’d be an additional ~1,000 cfs through town. The next time you bump into an irrigator on the street or in the field, you might just offer a heart-felt “Thanks!” for what they’re doing to reduce flood risks.

Finally, one of the wags who’s been close to the water managers noted late this week that “they’re starting to get a little nervous.” This is a rare instance in our water world when “a little” is actually better than “a lot.”

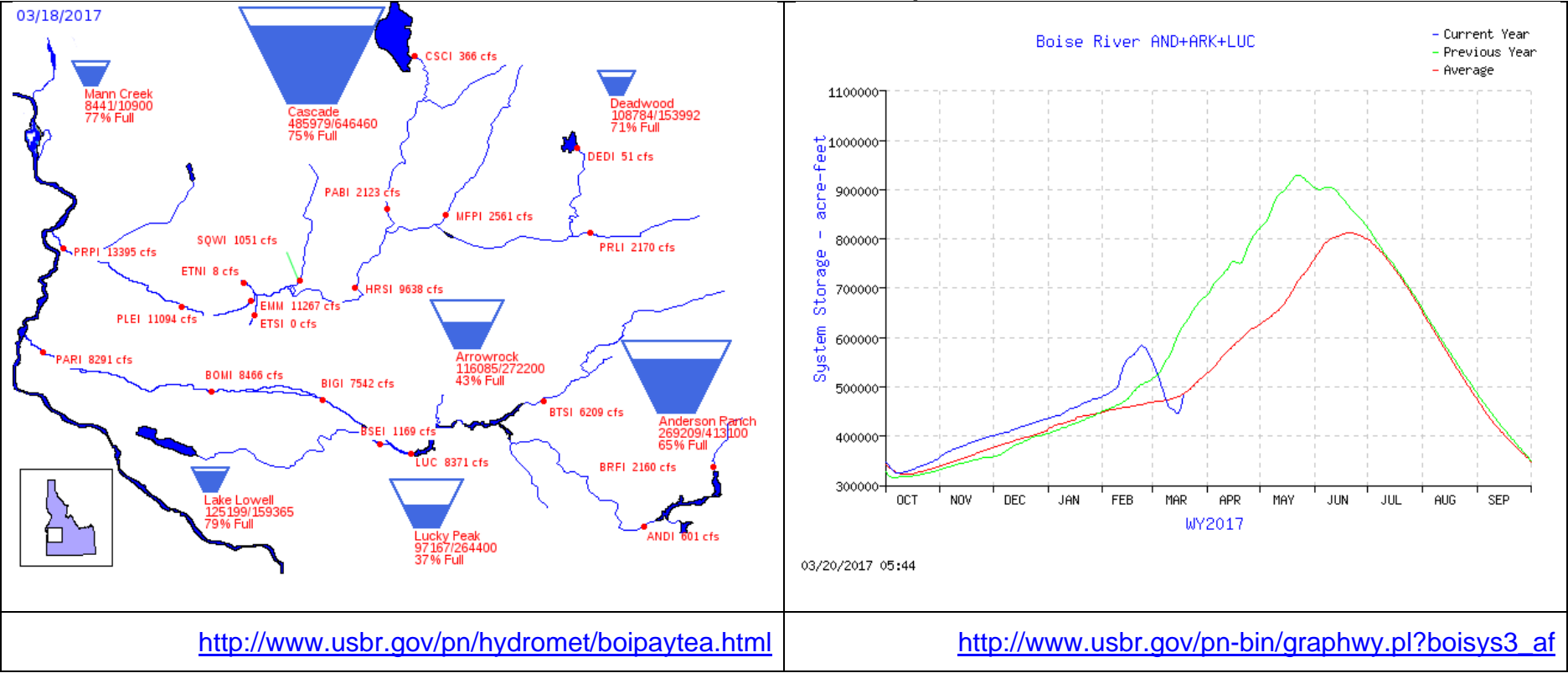
Post Script: Saturday, while hanging out with a handful of the Star locals, up sauntered this distinguished gentleman in his irrigation boots, blue jeans, denim shirt, a seasoned canvas coat and perhaps the coolest felt hat that you could imagine. Well, this fellow pulled out his smart phone and showed us all a message saying that the Boise River would be coming up again.

He says “8,100 cfs @ Glenwood on Monday.” Something about this guy and his sandbag says we probably ought to pay attention.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve





Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 52% of capacity.
Total space available: 451,854 AF
Total storage capacity: 949,700 AF
Natural Flow: 16,126 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, March 20, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	44.8	26.0	172	49.6	29.9	166
Bogus Basin	6340	24.2	22.2C	109	29.0	20.7C	140
Camas Creek Divide	5710	14.9	11.4C	131	24.8	15.4C	161
Dollarhide Summit	8420	40.0	N/A	*	-M	23.9	*
Graham Guard Sta.	5690	15.5	13.2	117	37.2	20.2	184
Jackson Peak	7070	33.4	24.6	136	47.4	29.9	159
Mores Creek Summit	6100	38.4	27.5	140	51.1	32.3	158
Prairie	4800	3.8	2.3	165	19.8	13.9	142
Trinity Mtn.	7770	50.2	32.3	155	55.3	36.1	153
Vienna Mine	8960	49.5	28.4	174	-M	27.4	*
Basin Index (%)		146			158		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

For an updated graphical representation of the Boise Basin 2017 Snowpack Comparison check out this site:

https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/basinsweplots/id/boise_swe_d.gif

According to the NRCS data, we’ve dropped 4 points to now being 41% ahead of the normal peak, which historically occurs on April 3 – just 2 weeks out.

Lo, “Beware the Ides of March!” That pesky blue line celebrated the 2,060th anniversary of Cesar’s assassination by turning northward and re-contacting the historic average depicted by the redline (upper right graph) - just in time for the first day of Spring! Last week’s inflow jumped from a modest 3,200 to 16,100 cfs over last weekend – see the next page for some impressive inflow plots that illustrate the magnitude of those inflows. At the same time, discharges out of Lucky Peak have been flat lined at 8,400 cfs for the full week. The difference between what’s coming in and what’s going out resulted in a 36,800 ac-ft (3%) increase in overall storage for the upper reservoirs. We’ve now crossed the half full mark (now @ 52%) and the system could likely experience more until things cool off in the upper basin later in the week.

Watershed snow-water equivalent eased 6 points since last week, so we’re now looking at only 146% of normal in the upper basin.

Interesting to note, at current inflow rates from the New York Canal, Lake Lowell should be filled up on April 3, the normal watershed snowpack peak date. What happens to the 1,200 cfs that’s in the New York Canal today, once Lowell fills, could surely make for an interesting set-up.

The Glenwood gage continues to dance right around 7,600 cfs on a pretty regular basis. There are a few rumblings of some instabilities near the head of Eagle Island and on the North Channel below Eagle Rd. However, that said, everything generally seems to be holding “Steady as She Goes!”

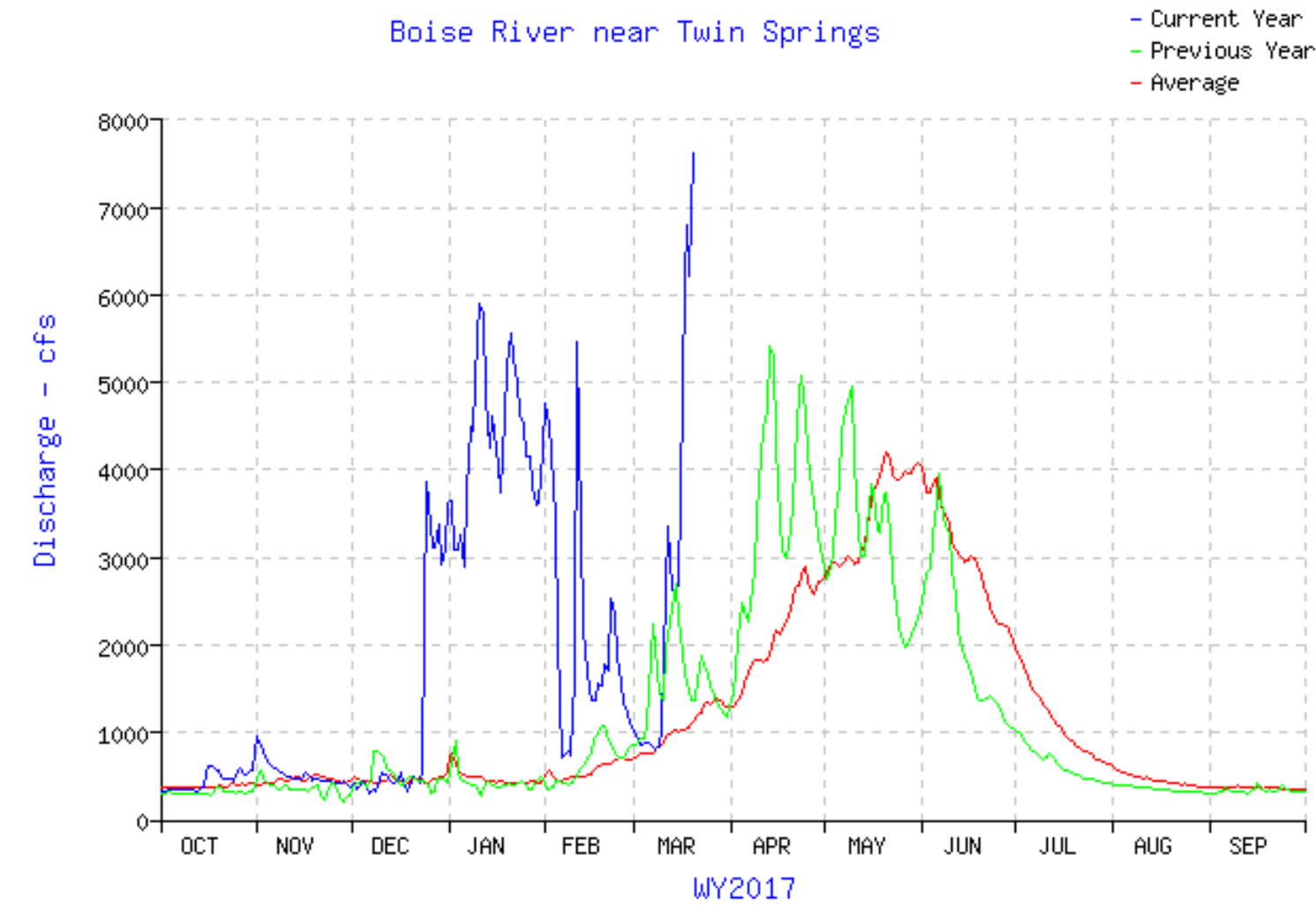
Finally, the earlier prognosis of 8,100 cfs at Glenwood last week never materialized. Apparently, the distinguished gentleman with the classic felt cowboy turned out not to be a soothsayer this time. As for future predictions for higher flows, that word doesn’t appear to be out on the street today.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

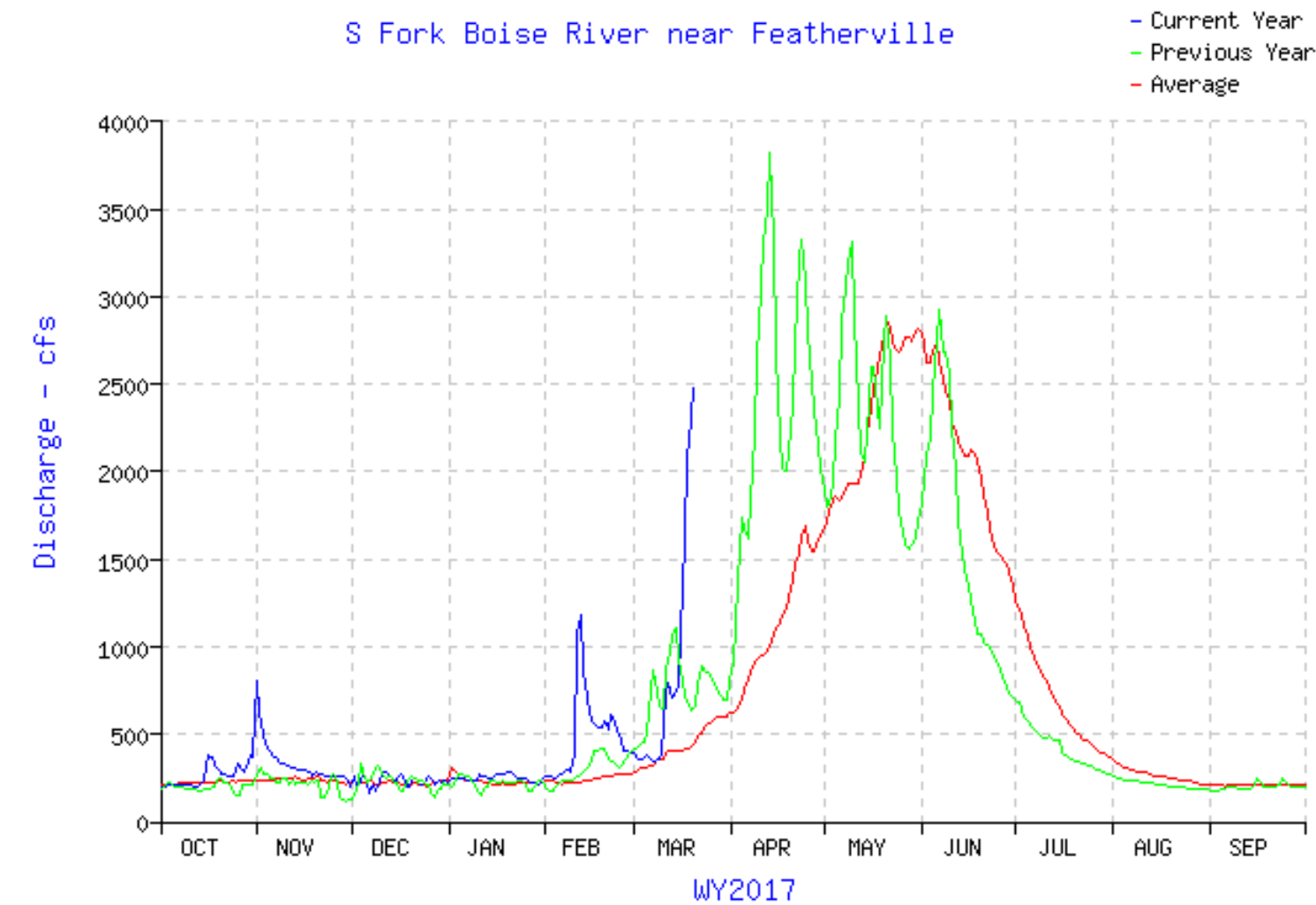
Steve



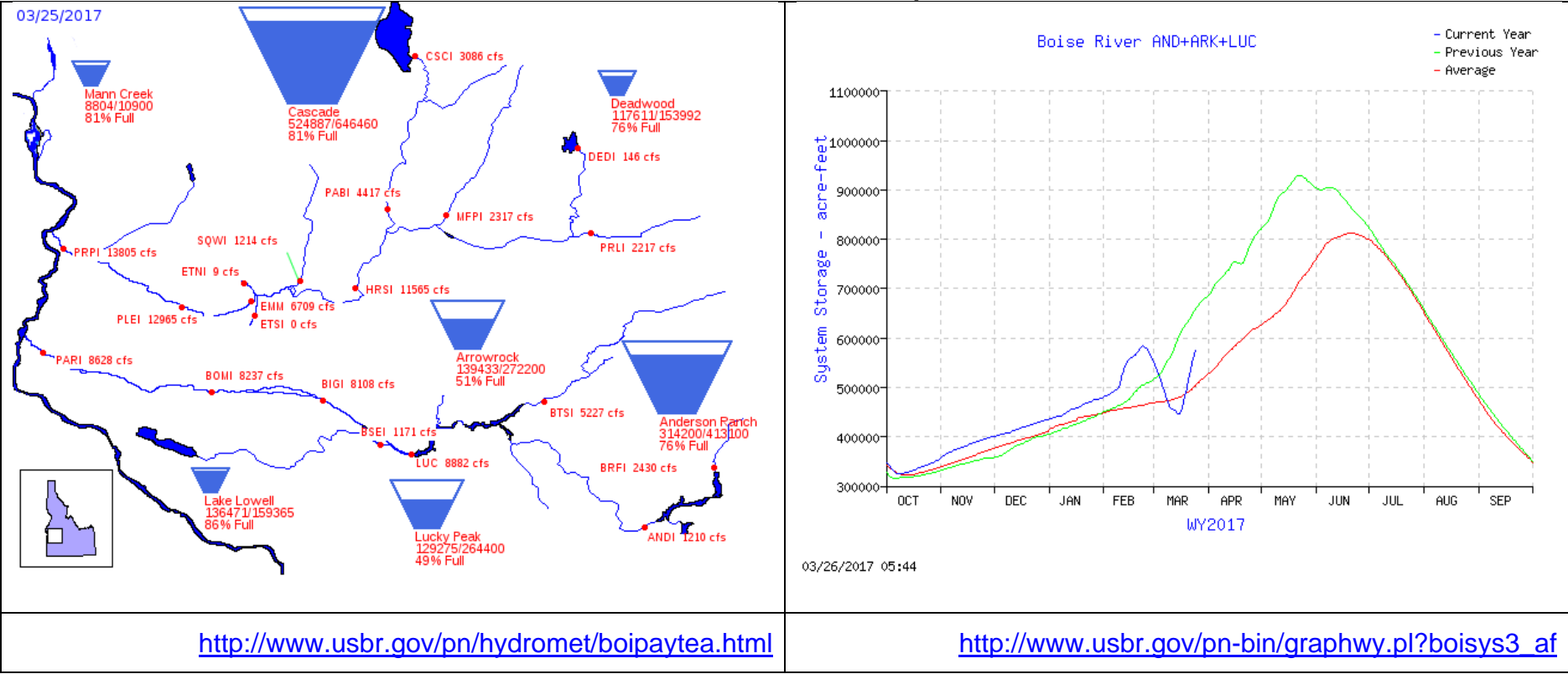
The two charts below show system inflow at Twin Springs (top) and Featherville (bottom). The red line represents the long-term average, green is what happened last year and the blue is what's happening this year. Those are some pretty impressive inflows coming into the system, and at the date of this Review, the inflow is still going strong.



03/20/2017 05:43



03/20/2017 05:43



Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 61% of capacity.
Total space available: 374,356 AF
Total storage capacity: 949,700 AF
Natural Flow: 14,278 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, March 26, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	45.5	27.0	169	50.8	30.8	165
Bogus Basin	6340	24.1	23.1C	104	30.1	21.5C	140
Camas Creek Divide	5710	13.2	11.1C	119	25.3	15.8C	160
Dollarhide Summit	8420	40.9	N/A	*	-M	24.8	*
Graham Guard Sta.	5690	14.1	12.6	112	38.0	20.8	183
Jackson Peak	7070	33.2	25.7	129	49.0	30.8	159
Mores Creek Summit	6100	36.4	29.7	123	52.2	33.2	157
Prairie	4800	0.0	0.3	0*	20.6	14.6	141
Trinity Mtn.	7770	52.4	34.0	154	58.1	37.2	156
Vienna Mine	8960	50.9	29.6	172	-M	28.4	*
Basin Index (%)		140			158		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

For an updated graphical representation of the Boise Basin 2017 Snowpack Comparison check out this site:

https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/basinsweplots/id/boise_swe_d.gif

With a week to go

Well, well.... Fueled by a week’s worth of inflows in the 12-17,000 cfs range and discharges out of Luck Peak around 9,000 cfs, the Pesky Blue Line (now capitalized in recognition of the new prominence), surged up and well past the 30-yr historic redline. Despite running the river hard at Glenwood, overall storage increased 78,000 acre-feet in the reservoir system – a big bump of 9% to the point that the system is now at 61% of capacity. Another day or two of this and storage will be at the high point for the season. Looks as though we’re heading for a full irrigation allotment this year.

For the second week in a row, watershed snow-water equivalent eased 6 points, so we’re now looking at only 140% of normal in the upper basin. The annual peak of precipitation in the hills historically occurs at April 3 – one week out. That means we may still see a bit more accumulation.

Lake Lowell still appears to be on track to be filled up on April 3, the normal watershed snowpack peak date. After next week, the hope is that irrigation demand will start lapping up some of the extra water. If that water doesn’t go into the canals and the runoff continues, this extra water will either show in a steepening of the Pesky Blue Line or will be passing Glenwood and heading for Astoria.

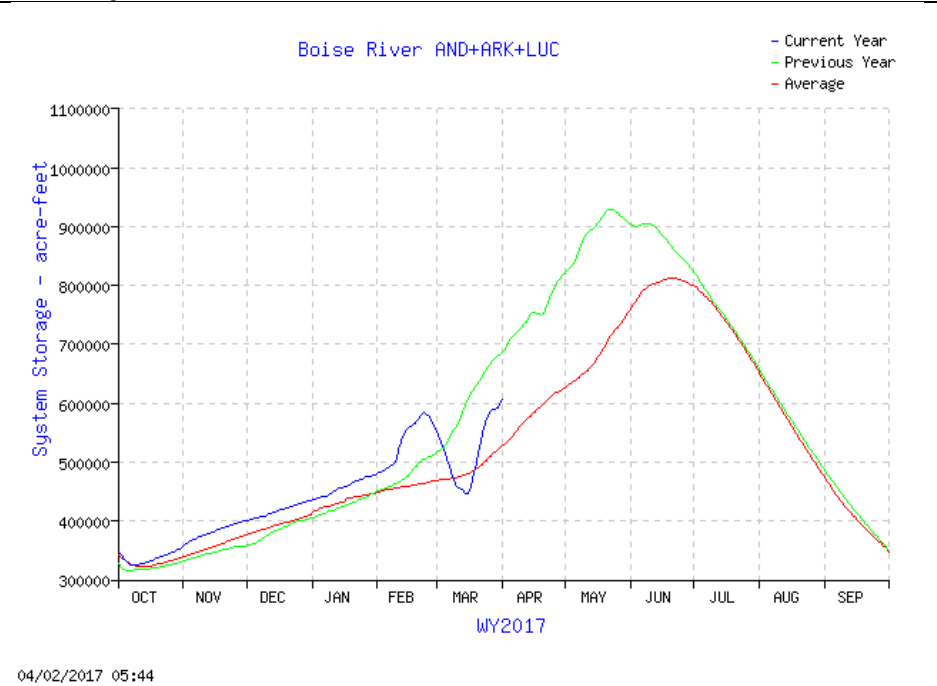
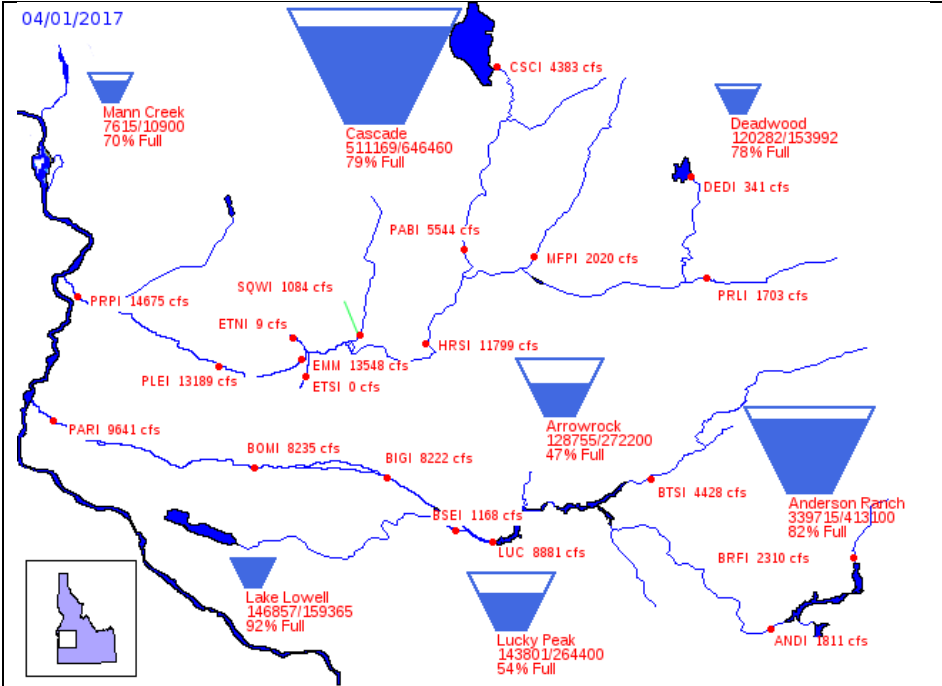
The Glenwood gage finally started clearing 8,000 cfs. Interesting to note that since the three reservoirs were completed over 60 years ago, we only saw 8,000 cfs or more at Glenwood on 24 days – 4 days in 2012 (8,050 cfs max), 10 days in 1998 (8,350 cfs max), and 10 days in 1983 (9,560 cfs max). As of Sunday evening we’ll have 3 more days and looking at many more to come. This could make for some interesting times as the banks saturate under the long-term bank full conditions and an occasional tree takes a bath.

Word on the street has a handful of folks with cameras, official looking vests and even a long, long measuring stick out at the head of Eagle Island this afternoon. These folks stood in a circle for the longest time, then took to pacing up and down the river prodding here and there, making a few measurements and painting cryptic notes the new bike path. Something’s up. Odds are, we’ll be hearing some sort of official declaration via our public officials soon enough.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve

Boise System Review
For the Week of
April 3, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 64% of capacity.
Total space available: 337,429 AF
Total storage capacity: 949,700 AF
Natural Flow: 12,234 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, April 2, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	46.7	27.4	170	53.0	31.9	166
Bogus Basin	6340	24.8	25.7C	96	33.2	22.5C	148
Camas Creek Divide	5710	11.9	10.2C	117	27.0	16.3C	166
Dollarhide Summit	8420	42.7	N/A	*	-M	25.7	*
Graham Guard Sta.	5690	12.9	11.7	110	39.6	21.5	184
Jackson Peak	7070	35.4	27.2	130	51.4	32.0	161
Mores Creek Summit	6100	-M	30.4	*	-M	34.2	*
Prairie	4800	0.1	0.0	*	22.7	15.2	149
Trinity Mtn.	7770	55.0	35.4	155	63.4	38.6	164
Vienna Mine	8960	52.8	30.3	174	-M	29.4	*
Basin Index (%)		143			163		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

For an updated graphical representation of the Boise Basin 2017 Snowpack Comparison check out this site:

https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/basinsweplots/id/boise_swe_d.gif

Looks as though we’ll be hitting the historic April 3 normal peak with a little more than 40% over average. Yippee!! Full irrigation allocations!

March threatened to close out the month within a few points of average precipitation down here in the Valley. Then, we received a record rainfall on Thursday and the month closed out at nearly twice the average. Amazing what another 1.4 inches of precipitation can do for monthly totals.

After two weeks of declining Snow Water Equivalents, last week made a marked turn and we gained three points on last week to close out at 143% of the long-term median for water stored up in the hills. The Water Year-to-Date totals bumped 5 points to finish the week at 163% of average. All good news in the irrigation world.

System inflows last week varied from matching the 9,000 cfs passing through Lucky Peak to flows upwards of the middle teens. All in all, the total system filled by 3 more points, putting the system at 64% of capacity. The additional 37,000 ac-ft system input kept the Pesky Blue Line on an upward track.

Now, there’s 337,000 ac-ft of capacity through which to pass upwards of 2,100,000 ac-ft of flow from April 1 through June (https://www.nwrfc.noaa.gov/water_supply/ws_ranking.cgi?id=LUC11&per=APR-JUL). That’s about 10,000 cfs all day and all night out of Lucky Peak from today through June. The good news is that the irrigators can use around 4,000 cfs per day (above Glenwood) to take their fair share, so we can reasonably expect to see 6,000 cfs coursing past Glenwood through June.

The Pesky Blue Line remains an item of interest, as even with these high early flows, the thing just isn’t bending to the Red Line (30-yr average). Despite best efforts to date, 2017 is going to stack up to a banner runoff year. Since our three dam system was completed in 1955, there have been only two years (1983 and 1998) when we’ve had 10 days of flows at Glenwood of 8,000 cfs or more. By the close of Sunday, April 2, we will have tied that record and will be heading for new territory.

Lake Lowell now appears to be on track to be filled up around April 6 or so, but irrigation deliveries could start to extend that date out. Fortunately, with irrigation season nearly upon us, demand in the fields is anticipated to help bend that Pesky Blue Line.

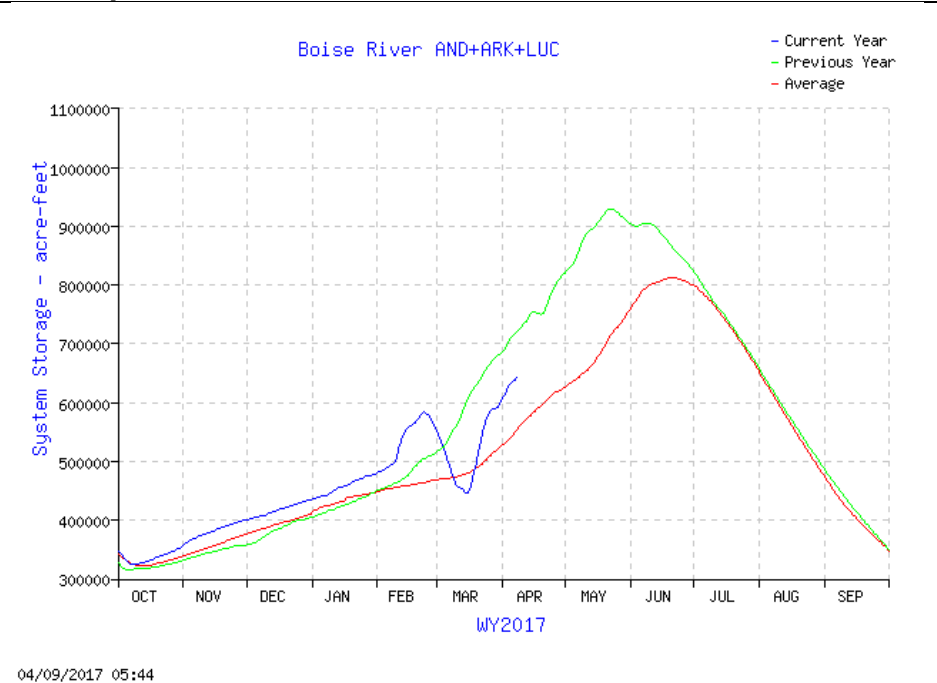
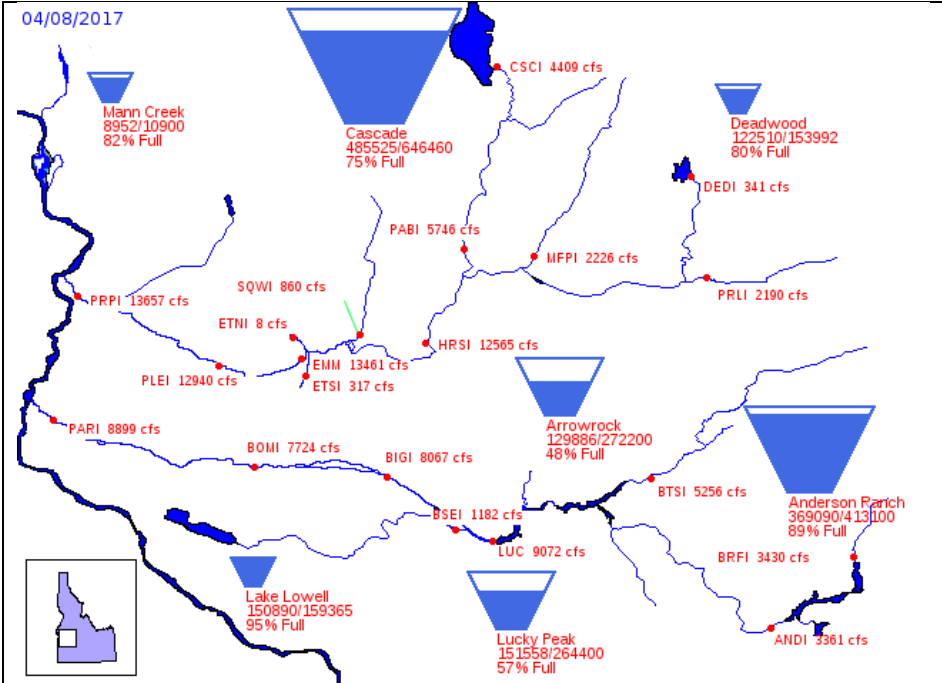
A few odds & ends from last week, the State of Idaho, Ada and Canyon Counties, Boise City and Flood Control District #10 have issued Emergency Declarations, due to the current runoff event; the fish have decided to leave Eagle Island (<http://tinyurl.com/kz2l4th>); and now one of the Greenbelt bridges has even decided it’s time to vamoose (<http://tinyurl.com/kfcvkdw>). Flying bridges - who woulda thought? Fortunately, at least the River is staying pretty much where it’s supposed to be.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve

Current and Previous Copies of the Boise System Review are here: <http://www.quadrant.cc/runoff-review.html>

Boise System Review
For the Week of
April 10, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 68% of capacity.
Total space available: 299,166 AF
Total storage capacity: 949,700 AF
Natural Flow: 12,600 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, April 9, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	47.2	26.6	177	54.1	32.8	165
Bogus Basin	6340	23.4	25.6 _c	91	33.5	23.4 _c	143
Camas Creek Divide	5710	9.1	7.4 _c	123	27.4	16.7 _c	164
Dollarhide Summit	8420	43.9	N / A	*	− _M	26.5	*
Graham Guard Sta.	5690	10.7	10.0	107	40.4	22.0	184
Jackson Peak	7070	34.9	27.1	129	52.5	32.9	160
Mores Creek Summit	6100	33.5	29.3	114	55.1	35.1	157
Prairie	4800	0.0	0.0	*	22.4	15.9	141
Trinity Mtn.	7770	55.8	35.8	156	65.1	39.6	164
Vienna Mine	8960	54.6	30.9	177	− _M	30.2	*
Basin Index (%)		140			160		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Wow! That was quite a week! It all started when a bridge got gun-shy and flew away from Plantation Island in a bid to sit this flood out. Then, the Boise River Watermaster, aka RiverDude, was heard on one rainy day to mutter, “That’s the last thing we need – more water!” Then, when the lower Boise jumped the channel down near Enrose (between Caldwell & Notus) blowing out the Eureka #2 diversion, the irrigators responded with “I wish the River wasn’t giving us so much water!” Flying bridges, too much rain, too much river water – these are really unprecedented times!

Keeping pace with times of import, on Tuesday, 2017 officially moved into first place in the record books for the greatest number of days, since the dams were finished in 1955, where the daily average flow was 8,000 cfs or more coursing past Glenwood. Through Saturday, April 8, the new record count is now 15 days (5 more than the prior) and she’s still going strong. Over 240,000 ac-ft have been vacated out of the system during this run. Amazing!

Only one record stands in the post-dams record books that hasn’t been broken in 2017 – in 1983, on one day the average daily flow at Glenwood peaked at 9,560 cfs. That was in mid-June, so there’s probably still plenty of time this year to challenge that discharge rate.

Speaking of discharge rates – official word is that; following the USACE’s building 4,300 lf of a HESCO flood wall (<http://tinyurl.com/k7n4fvb>) along the left bank (looking downstream) of the river in the vicinity of the head of Eagle Island; flows past Glenwood are expected to bump up 250 cfs on both Monday and Tuesday, putting upcoming mid-week flows past Glenwood at 8,610 cfs.

You might ask, “What’s driving all these weird events?” Well, wouldn’t you know it? This is all due to The Pesky Blue Line – and a bunch of snow up in thar hills. Take a look at the graph on the top right of this page. That Pesky Blue Line is 100,000 ac-ft higher than the 30-year average (the Red Line). All these record river discharges past Glenwood are attempting to get the Pesky Blue Line to bow to the Red Line. Complicating all this, the Mountain Snow Guru filed his monthly snow report and opined that there’s 2,100 ac-ft of runoff that we should anticipate heading our way during the April-June period. Youch! That’s an average flow out of Lucky Peak, 24/7 from April Fool’s Day to nearly the Fourth of July, at ~10,000 cfs. If the irrigators take their customary 4,000 cfs above Glenwood, that’s still 6,500 cfs through town for the 90 day window, just below flood stage. And, of course, that big average flow is not counting on any glitches that could throw something weird into the program.

Reservoir inflow last week exceeded outflow by 38,000 ac-ft, decreasing the available space to 299,000 ac-ft – 68% of available capacity is full.

Lake Lowell continues to hover at 95% full and, with this cool, wet weather, the delivery flows in the New York Canal will be tapering off. Once spring returns, we can expect to see those flows start getting more serious and decreasing flows in the river. All we need is a little time.

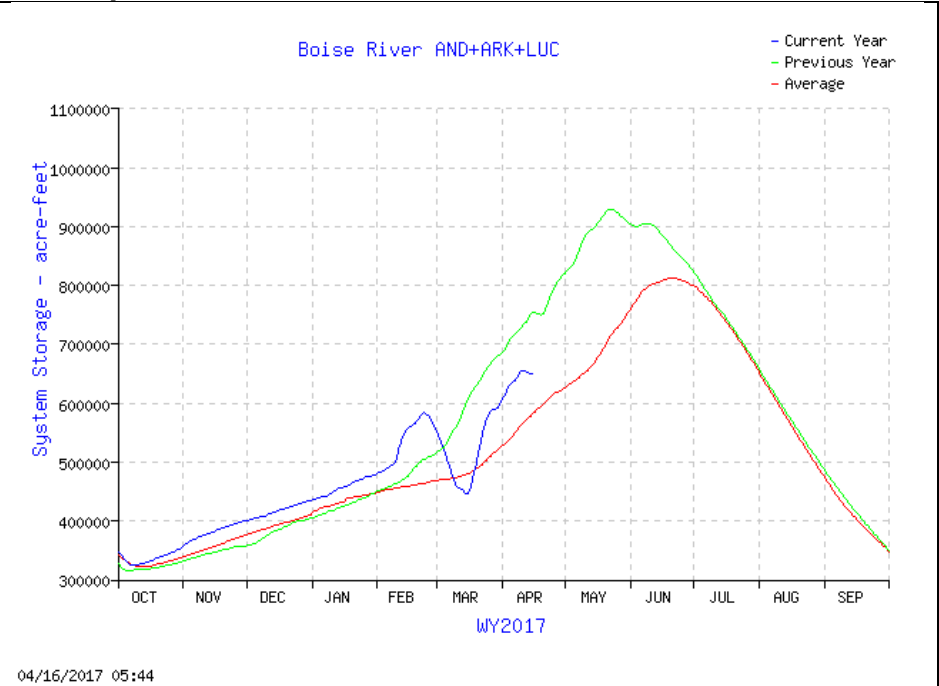
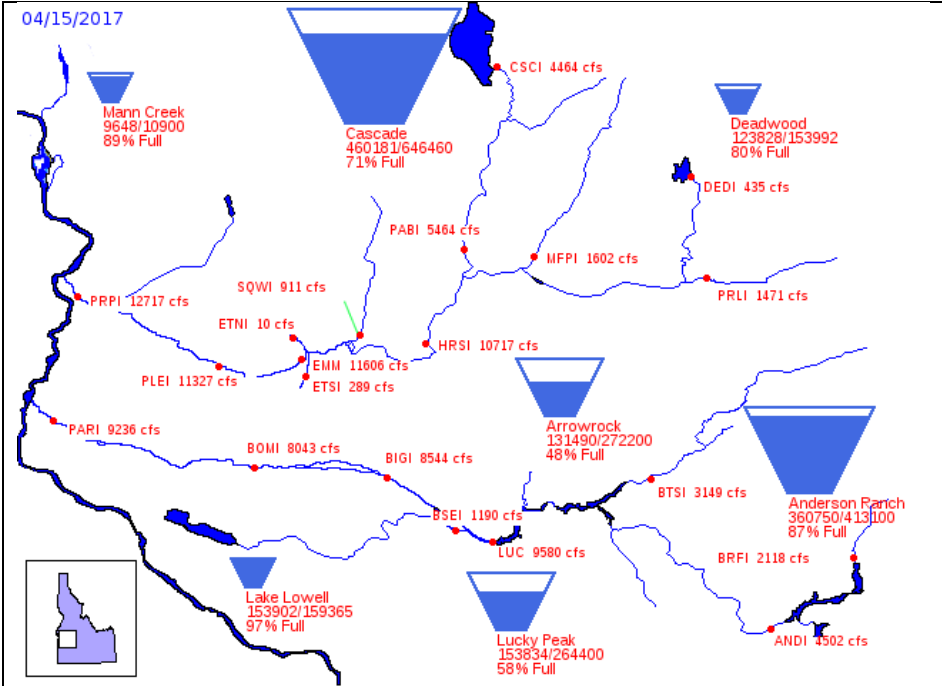
The River continues to stay pretty much where it’s supposed to be. That said, County Commissioners and Mayors have been publicly uttering “Pit Capture,” “South Channel,” and “Eagle Island,” all in the same breath. That’s new, particularly “Pit Capture.” Check it out: <http://tinyurl.com/ly4fv34> (The applicable piece begins at 2:00.) And to think that only a few years ago, there were engineers that denied this beast’s existence.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve

Current and Previous Copies of the Boise System Review are here: <http://www.quadrant.cc/runoff-review.html>

Boise System Review
For the Week of
April 17, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 68% of capacity.
Total space available: 303,626 AF
Total storage capacity: 949,700 AF
Natural Flow: 7,985 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, April 16, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	47.7	26.6	179	55.2	33.7	164
Bogus Basin	6340	24.4	22.4 _c	109	34.6	24.1 _c	144
Camas Creek Divide	5710	8.0	4.4 _c	182	27.6	17.0 _c	162
Dollarhide Summit	8420	–M	N / A	*	–M	27.1	*
Graham Guard Sta.	5690	9.9	7.3	136	40.9	22.7	180
Jackson Peak	7070	36.0	26.6	135	53.7	33.8	159
Mores Creek Summit	6100	33.6	27.4	123	56.4	35.8	158
Prairie	4800	0.0	0.0	*	23.5	16.4	143
Trinity Mtn.	7770	57.5	35.9	160	66.3	40.5	164
Vienna Mine	8960	55.6	31.7	175	–M	31.0	*
Basin Index (%)		150			160		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Well, wouldn't you know it, we've got the gift that just keeps giving. Last week, the Snow Water Equivalent for the basin was pegged at a respectable 140% of normal. Subsequent precip events have now bumped that 10 points, so we're now looking at a basin with 150% of normal SWE.

The good news is that last week, we didn't see any flying bridges, or fish driving away or Otters filling sand bags. To highlight that good news, after spending reportedly \$150,000 in a week to build a 4,300 lineal foot HESCO flood wall at the head of Eagle Island, the US Army Corps of Engineers, declared victory, turned the flood wall over to the proud new owner (Ada Co.), and have headed for other parts throughout the Pacific Northwest that are in need of federal muscle and expertise.

Once the flood wall was complete, the Lucky Peak gates were cracked a tad bit more until Glenwood flows were bumped another 500 cfs, up to 8,500 cfs late in the week. On Sunday evening Ada County's Chief Worrier-In-Chief informed us all that maybe things got carried away a bit and Glenwood flows will back off 200 cfs to get the flow back to 8,600 cfs

While the River surges away, records have tumbled. As of Monday, April 17, the River will have produced 23 days of flows greater than 8,000 cfs. During those three weeks, the equivalent of 40% of the upstream storage (370,000 + acre-feet) has been sent packing for Astoria. All the same, available storage in the system remains at 300,000 acre-feet (68% full). Note that The Pesky Blue Line has actually dipped and compared to last week at this time, available storage has declined by 4,000 ac-ft, week to week. Even though we seem to be holding our own, we've yet to hear anyone utter "Ollie, Ollie, Oxen Free" – most likely because a few of these Mountain Wags are observing that there's still 2.0 – 2.7 million acre-feet of snow to come out. For the Good of the Order, one should note that sometime prior to May Day, over the course of this year (Jan 1) more than 1,000,000 acre feet of water will have passed Glenwood.

Last week, we heard some concern about a pit capture closer to town, but now we're hearing that apparently the real McCoy showed up just downstream of Eagle Island a week or so ago following a precipitation surge. Apparently, from the vicinity of Eagle Island all the way down past the new Highway 16 Bridge, there's water in places where it's never been before.

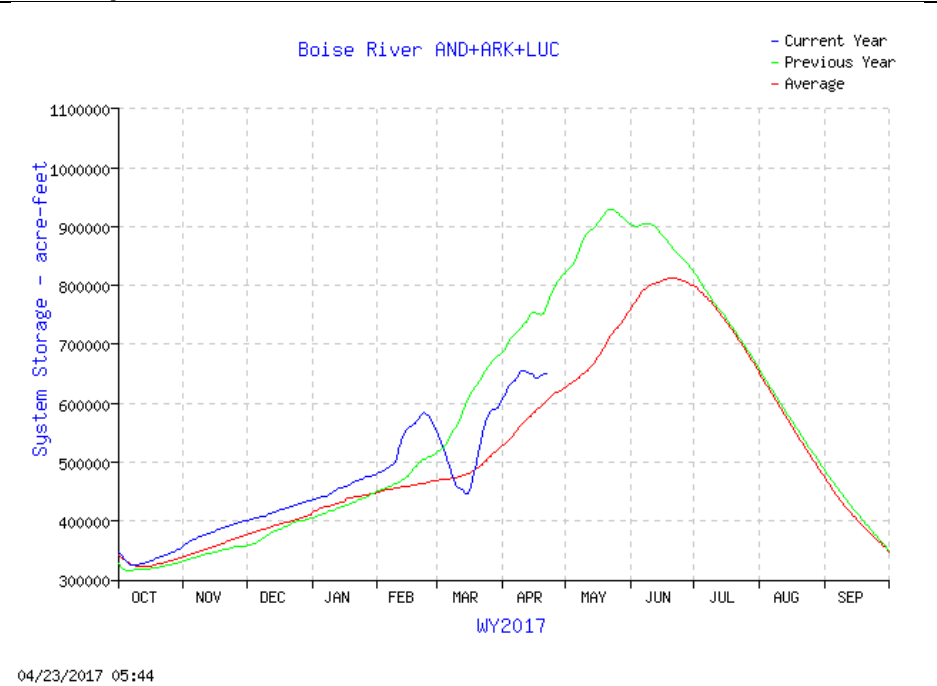
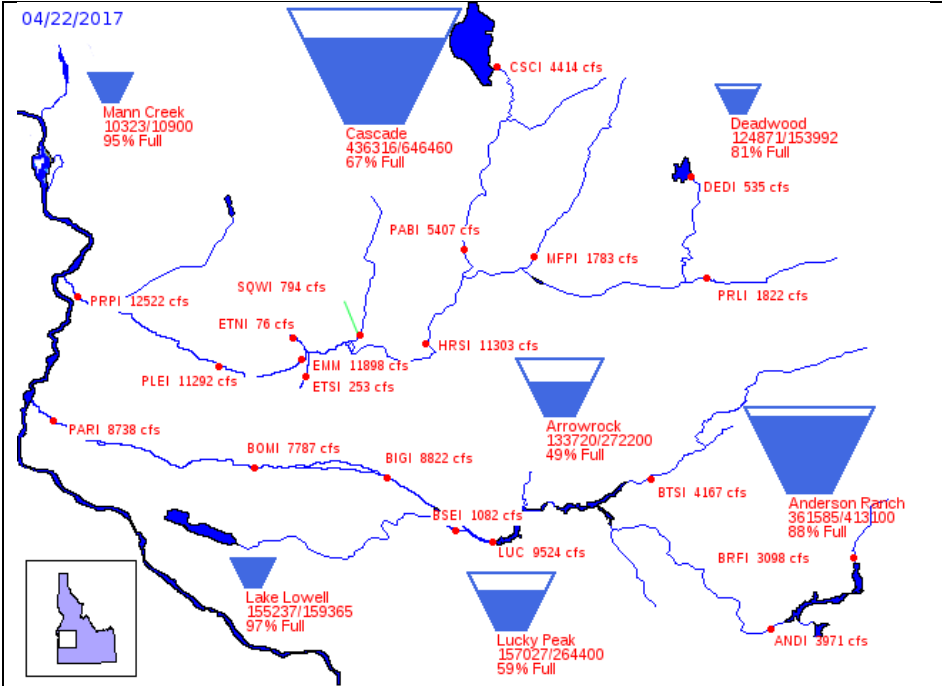
If you want to see where the water is these days, your best opportunity is to look at the great images that Boise River Flood Control District #10 has made available to the public for free. Check out www.boiseriver.org and click the "Boise River Flood-Aerial Imagery – April 2017" button. A Tip O' the Hat to Kevin Graville (Valley Air Photos) and Leo Geis (Idaho Air Ships) for getting a site up and serving images in less than a week after acquisition.

That's all for now.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, "Stay tuned."

Steve

Boise System Review
For the Week of
April 24, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 69% of capacity.
Total space available: 298,513 AF
Total storage capacity: 949,700 AF
Natural Flow: 10,131 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, April 23, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	48.5	25.2	192	56.8	34.6	164
Bogus Basin	6340	22.7	20.2C	112	36.0	24.7C	146
Camas Creek Divide	5710	2.3	1.1C	209*	28.4	17.5C	162
Dollarhide Summit	8420	47.6	N/A	*	-M	27.9	*
Graham Guard Sta.	5690	6.0	3.5	171	42.0	23.3	180
Jackson Peak	7070	37.4	25.0	150	55.4	34.7	160
Mores Creek Summit	6100	28.7	25.8	111	57.7	36.7	157
Prairie	4800	0.2	0.0	*	24.7	17.1	144
Trinity Mtn.	7770	58.9	35.5	166	67.8	41.6	163
Vienna Mine	8960	57.0	32.0	178	-M	31.8	*
Basin Index (%)		155			160		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Another week, another increase in Snow Water Equivalent (SWE) that saw us advance 5 points up to 155% of the median. If this weather ever dries up, 2017 could turn out to be an excellent irrigation year. Speaking of drying up, weather forecasters are calling for another “atmospheric river” through the upcoming week, so we’ll probably be waiting a bit more before things dry up. The current forecast will likely mean an increase in the SWE and more free water applied to the fields. In turn, don’t be surprised if there’s a commensurate reduction in irrigation deliveries for the short-term. The good news is that this year, we likely won’t be having to endure more about the prior drought.

Just for the Good of the Order, as of midnight Sunday, since flood flows were initiated in February, 949,700 ac-ft will have passed Glenwood. That’s exactly the entire upper basin storage. Wow! There’s been so much water, that the whole system’s already been sent down the river. Well, the good news is that there’s still 2,000,000 ac-ft up in the “Frozen Reservoir” that will be coming out one of these days – and all that has to squeeze through a 299,000 ac-ft bag (The reservoirs are at 69% of capacity today). According to some, as far as storage rights go, since the system’s been emptied, it’s all zero’s now.

Checking in with that Pesky Blue Line, in the last few days the curve has been moving slightly north again. Word on the street is that by May 1, the water managers would like to see the Pesky Blue Line have at least 150,000 ac-ft or more in remaining storage. Short of the atmospheric river opening things up later in the week, we look to be in pretty good shape on that count.

There’s still rumblings of potential challenges at the head of Eagle Island. The Governor assembled a mighty cadre of politicians and others to hold a press conference expressing support of the “hold the line” at 8,600 cfs maximum flow at Glenwood. In support of this target, water managers have reportedly gamed 20 prior water years with scenarios similar to 2017. Only two of those scenarios resulted in the need to release higher flows – 10,000 cfs – so there you have it – 2 out of 20 or a 10% chance of seeing flows reach 10,000 cfs this year. That sounds too good to be true!

However, what the Corps giveth, the Corps can taketh. Early last week, after a few gyrations, flows were 8,600 cfs. On Friday the river bumped back up to 8,800 cfs, something that’s been exceeded for only 5 days (June 1983), since the dams were finished in 1955. We’re still there now.

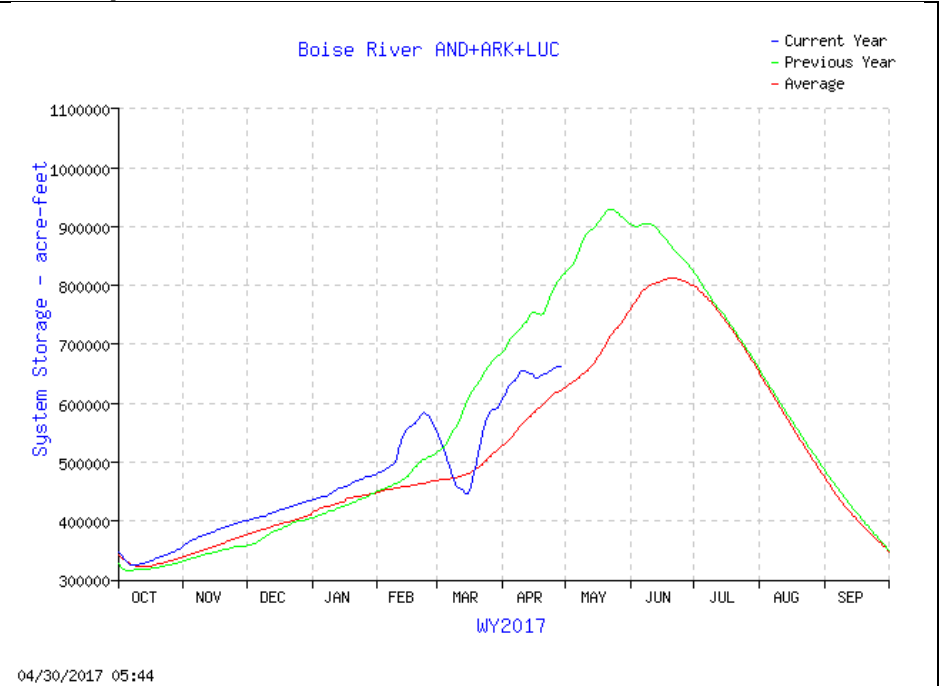
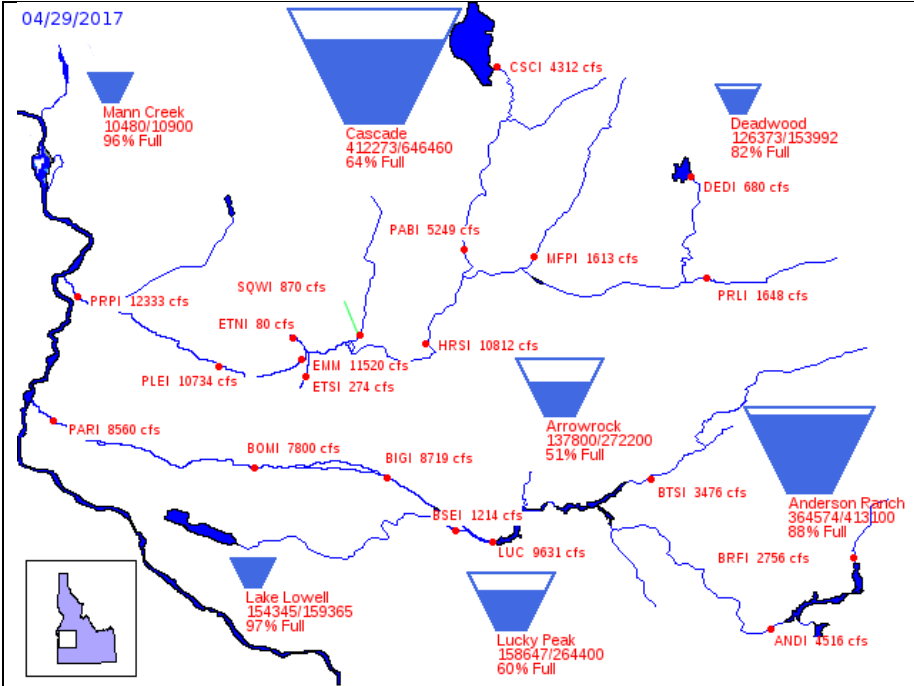
The river system’s running pretty tight these days, with channel flow getting frisky every now & again and trying to access the flood plain. Word on the street is that a brand new inter-agency amalgamation assembled Sunday morning to put the river back where it belongs and avoid a flanking of the County’s brand new HESCO floodwall installation. We all owe the newly formed “Ada County Flood Corps District” a sincere vote of appreciation for packing pallets of sandbags in to buttress a compromised flood plain. These folks were a modern day “Little Dutch Boy.”

That’s all for now.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve

Boise System Review
For the Week of
May 1, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 70% of capacity.
Total space available: 288,679 AF
Total storage capacity: 949,700 AF
Natural Flow: 8,792 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, April 30, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	49.3	24.2	204	58.1	35.4	164
Bogus Basin	6340	24.0	18.7 _c	128	38.1	25.0 _c	152
Camas Creek Divide	5710	0.0	0.0 _c	*	29.0	17.9 _c	162
Dollarhide Summit	8420	48.2	N / A	*	–M	28.6	*
Graham Guard Sta.	5690	2.5	0.0	*	42.9	24.0	179
Jackson Peak	7070	38.8	24.4	159	57.3	35.7	161
Mores Creek Summit	6100	27.6	23.9	115	59.3	37.5	158
Prairie	4800	0.0	0.0	*	25.2	17.6	143
Trinity Mtn.	7770	59.9	35.5	169	69.1	42.5	163
Vienna Mine	8960	57.3	31.3	183	–M	32.6	*
Basin Index (%)		164			161		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Another week & another increase in Snow Water Equivalent (SWE) that bumped us another 9 points - to the point that we’re now sitting at 164% of the median. The long & the short of that: There’s definitely water up in them thar hills. The good news is that the rain appears to be in the rearview mirror and the first half of May is forecast to be slightly warmer than normal. Using New York Canal deliveries as a surrogate for irrigation demand, the irrigators are taking right at two-thirds of normal demand. That’s cause for concern, as free water’s just slippin’ away downstream.

As natural flows have slacked back to 8,800 cfs that Pesky Blue Line appears to finally hit a flat spot and these high releases are starting to tame the line. A few weeks ago the Water managers said that they’d like to see at least 150,000 ac-ft or more in available storage by May 1. With nearly double that amount available - according to that theory at least – there’s not much more to worry about. All we have to do is wait it out until Independence Day, and we’re home free.

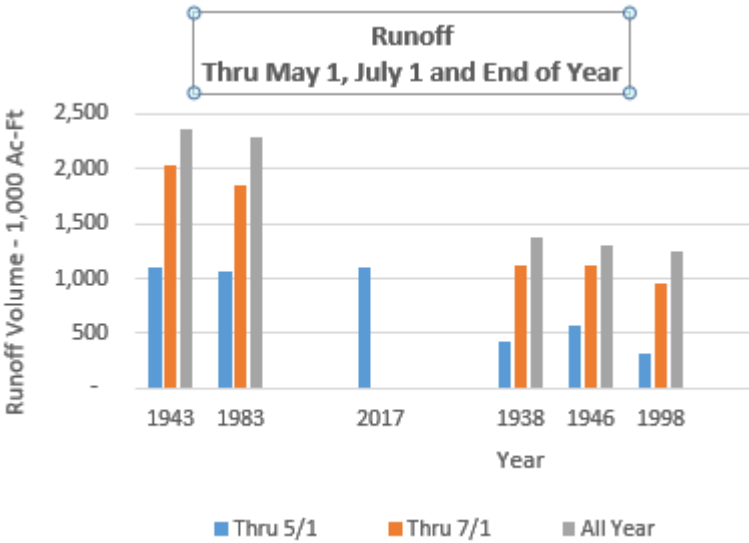
By all accounts, the system seems almost on autopilot right now. Here and there the river’s attempting to access the floodplain, but generally with a few water filled bladders strung out in strategic spots, an apparently random sandbag row stacked along a few low spots, and a few drones providing coverage on the evening news, heck, everything seems to be just peachy. These hardly seem to be record times for the Boise River.

Let’s take a closer look. First, there’s a fair amount of data on the Boise River – over 29,500 average daily discharge values – dating back to March 1938 – nearly 80 years. Out of all those years, the top five flood years were 1943, 1983, 1938, 1946, and 1998 (See the chart to the right). And in those years, there have been 436 days where the recorded average daily discharge has met or exceeded 7,000 cfs. In 2017, there have been 55 days at or above 7,000 cfs (12.6%) and they just keep coming!

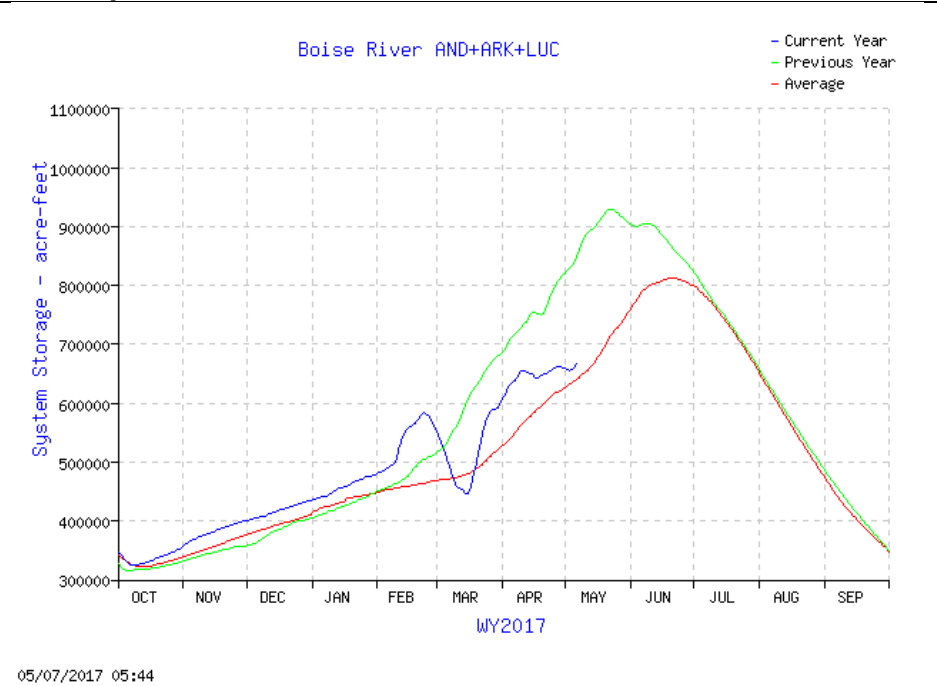
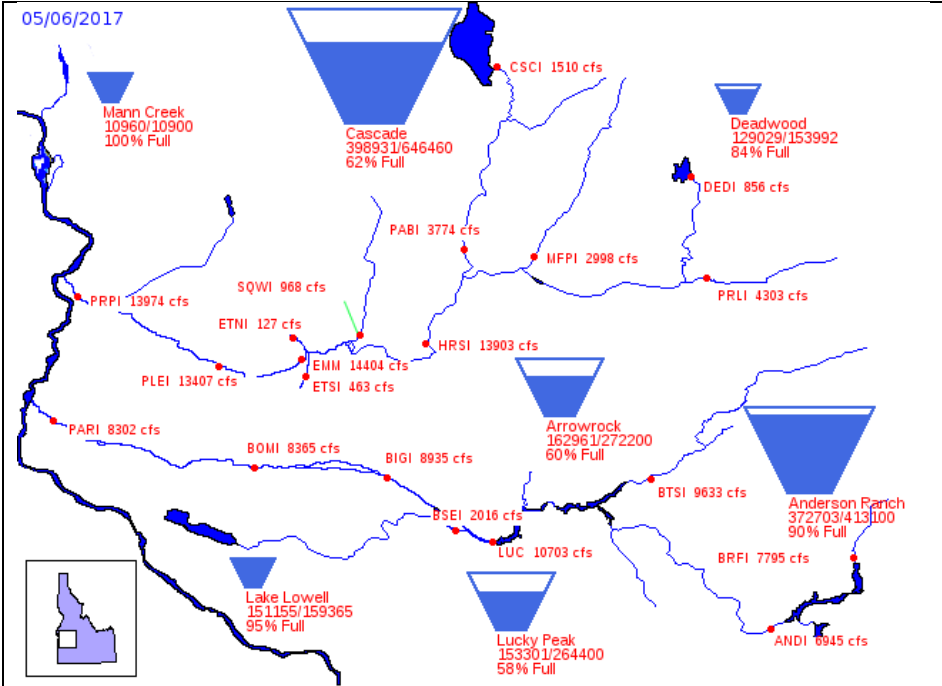
Looking back, only the “Mother of All Boise River Runoff Events,” 1943, saw more water past the Glenwood/Capitol gage by May 1st – 1,108 kaf vs. 1,098 kaf this year. Interesting to observe that the remaining records to be broken in 2017 all involve maximum average daily flows. This year’s maximum (so far!) has been 8,930 cfs, which has been exceeded in 1983 (9,560), 1948 (9,500), 1946 (10,800), 1938 (12,700) and 1943 (20,500). Note that only 1983 occurred after the dams were finished.

In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve



Boise System Review
For the Week of
May 8, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 73% of capacity.
Total space available: 260,735 AF
Total storage capacity: 949,700 AF
Natural Flow: 21,043 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Sunday, May 7, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	44.9	23.2	194	58.6	36.2	162
Bogus Basin	6340	17.4	16.2 _c	107	38.4	25.7 _c	149
Camas Creek Divide	5710	0.2	0.0 _c	*	29.2	18.4 _c	159
Dollarhide Summit	8420	48.7	N / A	*	–M	29.2	*
Graham Guard Sta.	5690	0.1	0.0	*	43.3	24.6	176
Jackson Peak	7070	36.3	20.9	174	58.3	36.5	160
Mores Creek Summit	6100	17.6	21.6	81	59.7	38.2	156
Prairie	4800	0.0	0.0	*	25.4	18.0	141
Trinity Mtn.	7770	56.5	35.0	161	70.4	43.4	162
Vienna Mine	8960	53.6	28.1	191	56.4	33.3	169
Basin Index (%)		156			160		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

“Holy Snowpack Melt, Batman!” Springtime filling of the reservoirs appears to have kicked in with the warm weather, late last week. A week ago the system natural flow was reported at 8,800 cfs, and this Sunday’s figure jumped to 21,000 cfs – brought on by those lovely spring days. Inflow was enough for The Pesky Blue Line to start trending north again, diverging from the 30-year average of the Red Line. The good news is that the system still has 260 thousand acre-ft (kaf) of capacity and the irrigators, based on New York Canal diversions, have bumped their demand nearly 50% from last week’s deliveries. On top of that the weather outlook is for more farming-friendly days for the next week, so we can all look for the irrigation demand to keep on track with 3,000 to eventually maybe even 4,000 cfs of irrigation diversions.

The Snow Water Equivalent in the hills dropped 8 points from last week and now stands at 156% of median. NRCS’s May 1, Idaho Water Supply Outlook Report hit the streets last week. According to the Snow Guru, there’s still snow in the hills and we can expect to see 1,770 kaf (range: 1,620-1,930 kaf) coming down to Boise between May Day and the end of July. That’s an average daily flow between 9,000 and 11,000 cfs. Deducting normal irrigation flows, we can likely expect flows at Glenwood to run thru July somewhere in the range of 5-8,000 cfs - each and every day. No need to worry about floating the Boise River until sometime around the Dog Days of August. Youch!

Early last week, the average daily flow out of Lucky Peak finally crossed 10,000 cfs for the first time this season. Since then, the flows have followed increased irrigation flow and have gradually crawled up to 10,800 cfs. Nobody’s saying, but lots of folk seem to be thinking that a prudent target flow out of Lucky Peak will be on the order of 11,000 cfs in the next 7 to 10 days. If the irrigators can’t use the water, or if things come off a little quicker than the averages predict, a bump in flows passing Glenwood could be on our horizon.

The local trout aficionados are keeping a close eye on Anderson Ranch Reservoir. Sometime Saturday, inflow reports went incommunicado, when the gage at Featherville hit a little over 8,000 cfs. In the course of a day, Anderson Ranch gained over 15kaf, leaving 35 kaf before being full - less than three days at these rates. With the Snow Guru calling 740 kaf sitting above the reservoir, we could finally see some releases into the South Fork that could move that slug of sediment from the 2012 fire.

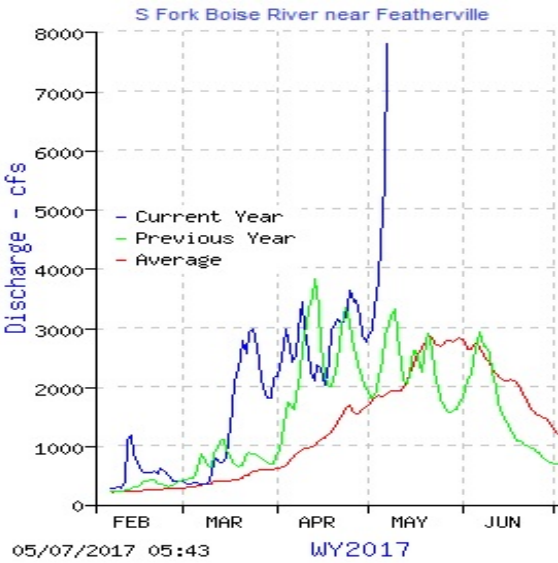
Come Monday, we’ll have been 84 days in flood control mode, with 62 days at 7,000 cfs or more. These long duration flows are taking a toll on channel banks, overhanging riparian vegetation, Greenbelt paths and local water managers. Eventually, we’ll all get through this aria, but there’s still no one calling for the final curtain, nor are there even hints of music coming from the hills.

Earlier this season, there were reports of the RiverDude uncharacteristically stating, “I think we’ve had enough water for this year.” As of late, he’s been strangely quiet. However, word on the street has it that he’s cogitating a new pronouncement.

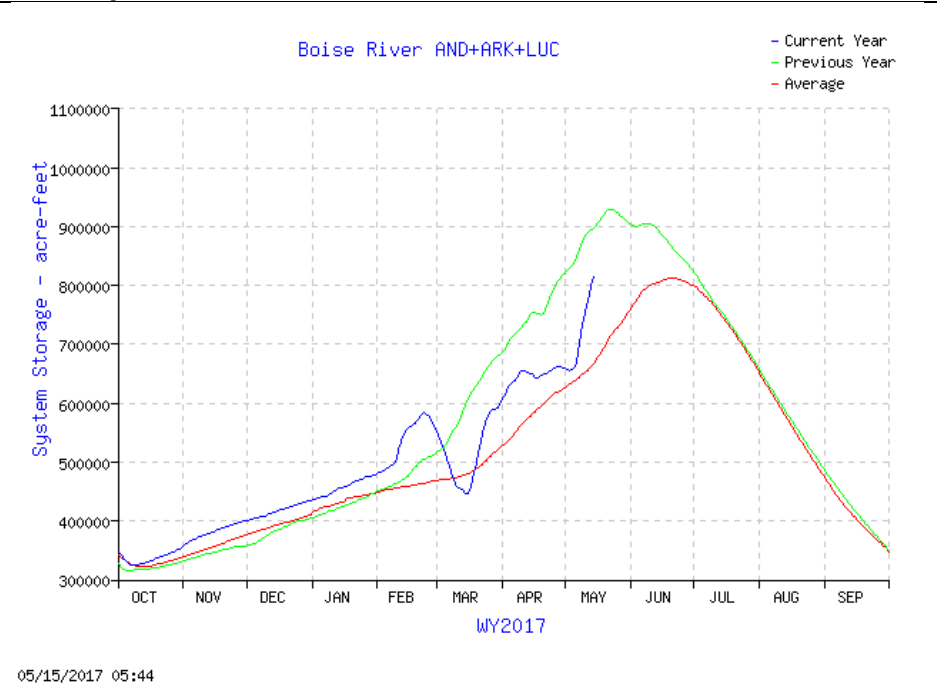
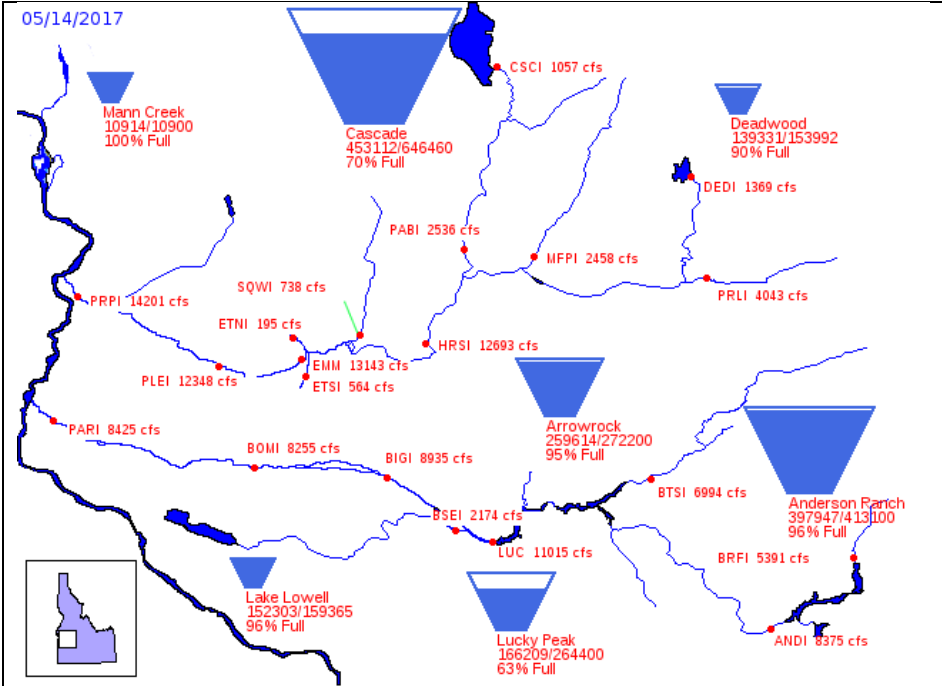
In accordance with tradition and in the words of the almighty & omnipotent RiverDude, “Stay tuned.”

Steve

Current and Previous Copies of the Boise System Review are here: <http://www.quadrant.cc/runoff-review.html>



Boise System Review
For the Week of
May 15, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 87% of capacity.
Total space available: 125,930 AF
Total storage capacity: 949,700 AF
Natural Flow: 14,945 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, May 15, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	38.7	21.4	181	58.7	36.9	159
Bogus Basin	6340	13.0	10.6 _c	123	38.5	26.1 _c	148
Camas Creek Divide	5710	0.0	0.0 _c	*	29.4	18.8 _c	156
Dollarhide Summit	8420	37.5	N / A	*	–M	29.9	*
Graham Guard Sta.	5690	0.0	0.0	*	43.5	25.1	173
Jackson Peak	7070	31.1	18.0	173	59.4	37.1	160
Mores Creek Summit	6100	7.0	16.9	41	59.8	38.9	154
Prairie	4800	0.0	0.0	*	25.6	18.4	139
Trinity Mtn.	7770	52.6	31.9	165	70.5	44.2	160
Vienna Mine	8960	51.7	27.9	185	57.2	34.0	168
Basin Index (%)		153			158		

Legend - “-M” = Missing data. “*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Simply amazing what three months of flood control operations (91 days & counting) can do to public interest. In the 69 days of flows at 7,000 cfs or more, 1.32 million acre-feet (maf) have slipped past our fingertips as measured at the Glenwood gage. The reservoir system will have dumped 1.4 times as of today. Yesterday tied the biggest average daily discharge of the year (8,940 cfs @ Glenwood) and all the while the river just merrily steams along. No big deal. At this point, big water seems almost status quo.

Lurking in the shadows, some of the figures might cock an eyebrow. Inflows in the 20,000 cfs range certainly made quite a mark last week, as That Pesky Blue Line (upper right graph) headed for the stars. Available storage declined by nearly half to 126 kaf, due to inflows being nearly twice the Lucky Peak discharge. The irrigation community has stepped up demand with all this free water coursing past their headgates, and drawing approximately 10% over the long-term average, as indicated by the recent New York Canal draw of nearly 2,200 cfs. In the meantime, the snow water equivalent dropped three points to 153% of median. Being the 15th of the month, we eagerly await the Snow Guru’s mid-month report. The good news is that we appear to be heading to a bit of a cooling trend that will continue to drop the natural flow inflow, perhaps bending That Pesky Blue Line to flat line or maybe even head a tad to the South.

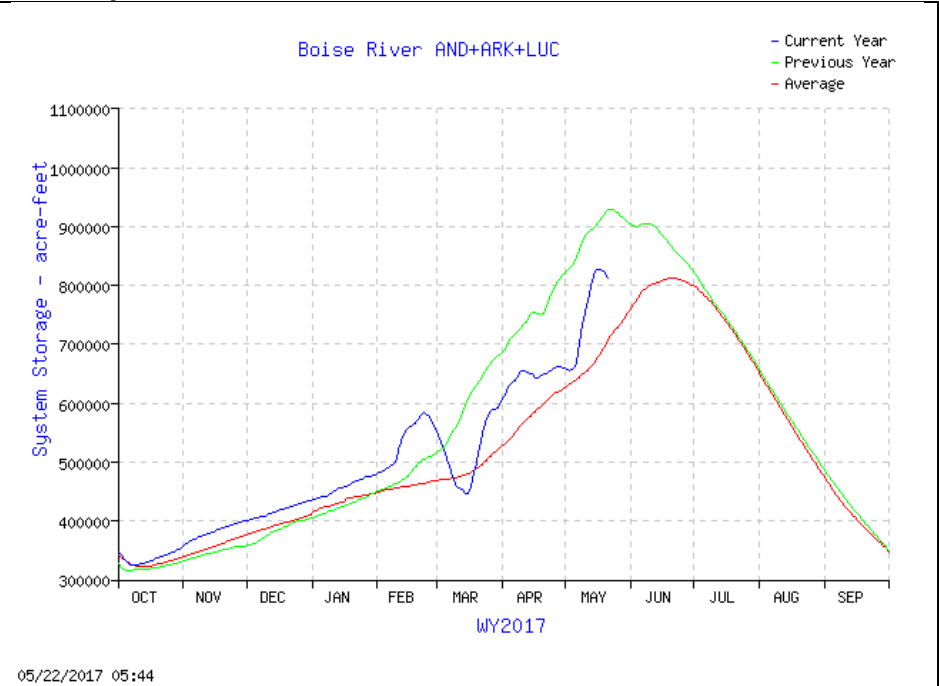
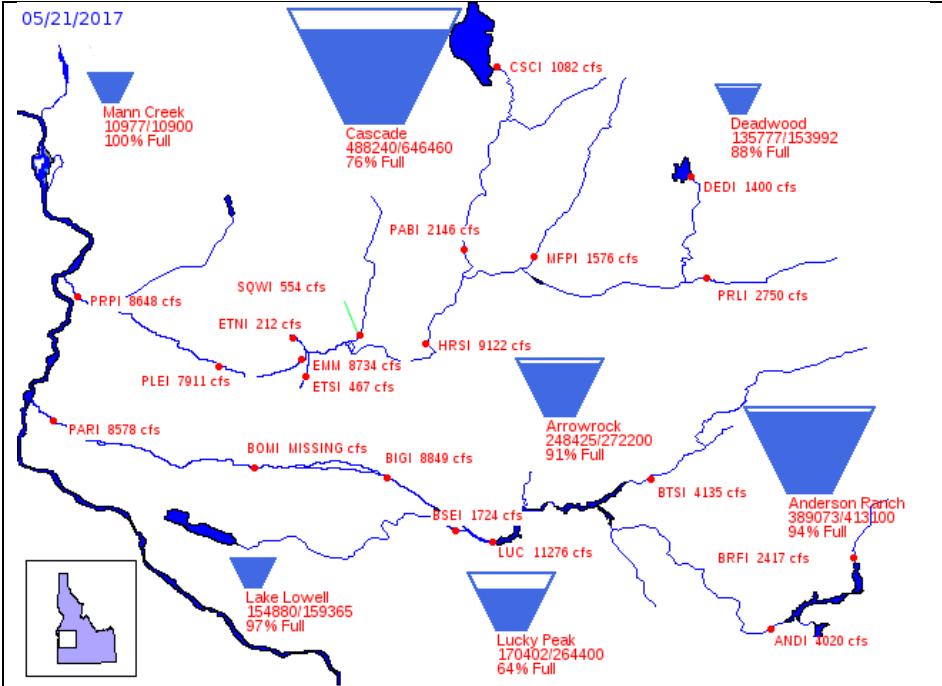
An ever-increasing cadre of local hydrologic wags continue to tumble the numbers on date-to-fill, etc. and prognosticate on upcoming maximum flows heading past the gages. (Note: Count yours truly as a part of that cadre.) While there’s been a murmur that the water managers over in Walla2 have softened somewhat on “there’s only a 10% chance of hitting 10,000 cfs at Glenwood this year,” most recent official projections bump the river to only 9,500 cfs by Tuesday. That’s less than the 1983 historic crest (9,840 cfs, June 13), and can be characterized in the words of the indomitable Yogi Berra, “It’s like déjà vu all over again.”

While a gaggle of us down in the Valley fret, pine & brood over the potential of what’s to come out of the hills, we should all take comfort and solace in the fact that everything’s well in hand. Over the years, the water managers have done a remarkable job at skillfully managing our precious water resource. Assurances of less than a 10% chance of 10,000 cfs should calm even the most restive of us worry warts.

In accordance with tradition and in the most recently updated words of the almighty & omnipotent RiverDude, “Stay tuned!!!!!!!!!!!!!!”

Steve

Boise System Review
For the Week of
May 22, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 85% of capacity.
Total space available: 141,800 AF
Total storage capacity: 949,700 AF
Natural Flow: 8,653 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, May 22, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	37.1	15.4	241	60.0	37.7	159
Bogus Basin	6340	10.8	0.0 _c	*	39.8	26.8 _c	149
Camas Creek Divide	5710	0.1	0.0 _c	*	30.0	19.3 _c	155
Dollarhide Summit	8420	35.0	N / A	*	48.5	30.7	158
Graham Guard Sta.	5690	0.0	0.0	*	44.2	25.8	171
Jackson Peak	7070	30.4	14.2	214	60.7	38.0	160
Mores Creek Summit	6100	3.6	9.5	38	61.4	39.7	155
Prairie	4800	0.0	0.0	*	26.3	18.9	139
Trinity Mtn.	7770	50.7	29.6	171	71.6	45.2	158
Vienna Mine	8960	–M	24.4	*	57.3	34.8	165
Basin Index (%)		193*			158		

Legend -“-M” = Missing data. “C” = Conditional, only 10-19 years of data available.

“*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

HEADLINE: *That Pesky Blue Line Hooks Southerly!* Looks as though weeks of water manager persistence finally caught up with That Pesky Blue Line (upper right graph) and taught that thing a lesson or two. Natural flow nearly halved to 8,700 cfs and relentless discharges from Lucky Peak created an additional 16,000 ac-ft (16 kaf) of space through the 8,800 cfs onslaught at Glenwood – or 8,600 cfs at Parma. Reservoir capacity increased 2% to 142 kaf (We’re now 85% full). While residents of all stripes living at the lower end of Eagle Island, along with the agricultural community as a whole, struggle with wandering water, the remainder of the community bides our time, awaiting the remaining 60% of the snowpack to pass by. Ninety-eight days of flood control releases and 76 days at flood stage (7,000+ cfs at Glenwood) have to be some sort of records. And we ain’t done yet...

All the same, there’s still a veritable “Tail-Load” of snow in the hills. Based on where we usually are at this time of the year, the Snow Water Equivalent for the Boise Basin (“the depth of water in the snowpack, if the snowpack were melted, expressed in inches.”) jumped 40 points last week to 190% of median. One should reasonably expect that water to be coming out over the next 6-8 weeks.

Good news: the first inkling of relief appeared just last week, as the RiverDude started cogitating about the date to begin reservoir fill. Sounds as though things could be calmed down enough by mid-June that final fill could be on the horizon. Hmmm...., all we have to do is get through this next three weeks without a major incident. That’s qualifying as our first hint of a curtain call for this year’s runoff drama. Before that, though, we’ll need to watch how the melt progresses this week. Natural flow is on the uptick and upcoming 80 degree days are expected to flatten That Pesky Blue Line through the remainder of this week.

The RiverDude also mentioned that the agricultural community is going beyond the call and doing what they can to help out with the flooding situation. The Boise Project has topped off Lake Lowell previously and Project irrigators continue to take as much the fields will absorb – without killing their crops, of course. With the return of the warm weather this week, we can expect the canal system to draw more – and Lucky Peak discharges should increase accordingly. On top of that the RiverDude notes that the Nampa & Meridian is diverting more than they need, passing on the extra to their downstream spills, which drop into the Settlers system. Settlers, too, are drawing extra and dumping theirs and NMID’s excess onto the Pioneer, who in turn have to route the excess back to the river, far below Glenwood. These folks are going out of their way to do what they can to help the urban folk – and not grousing a word. Good form! The next time you bump into an irrigator, make sure you offer a heart-felt “Thanks!” for their efforts to help.

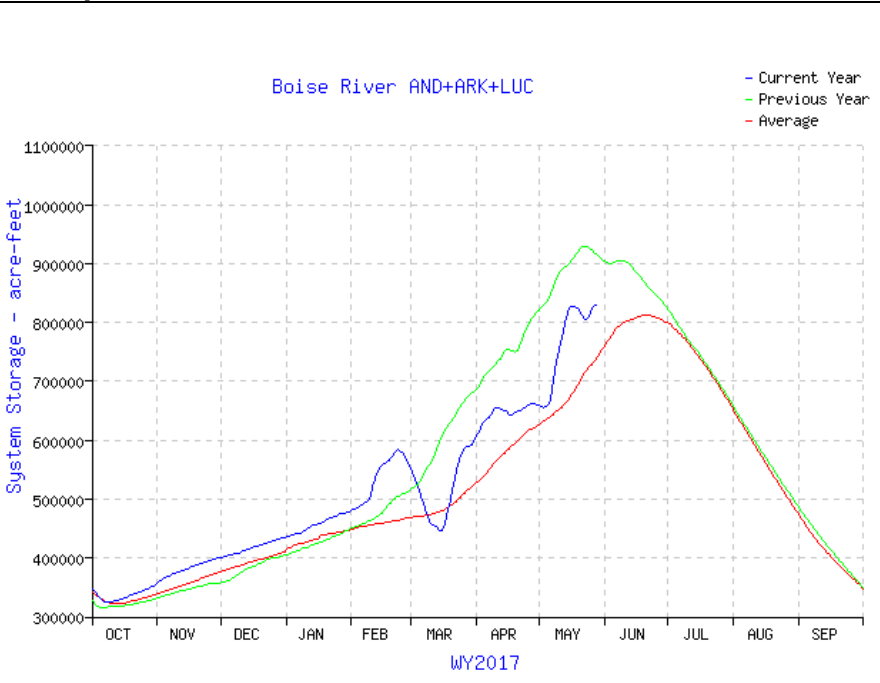
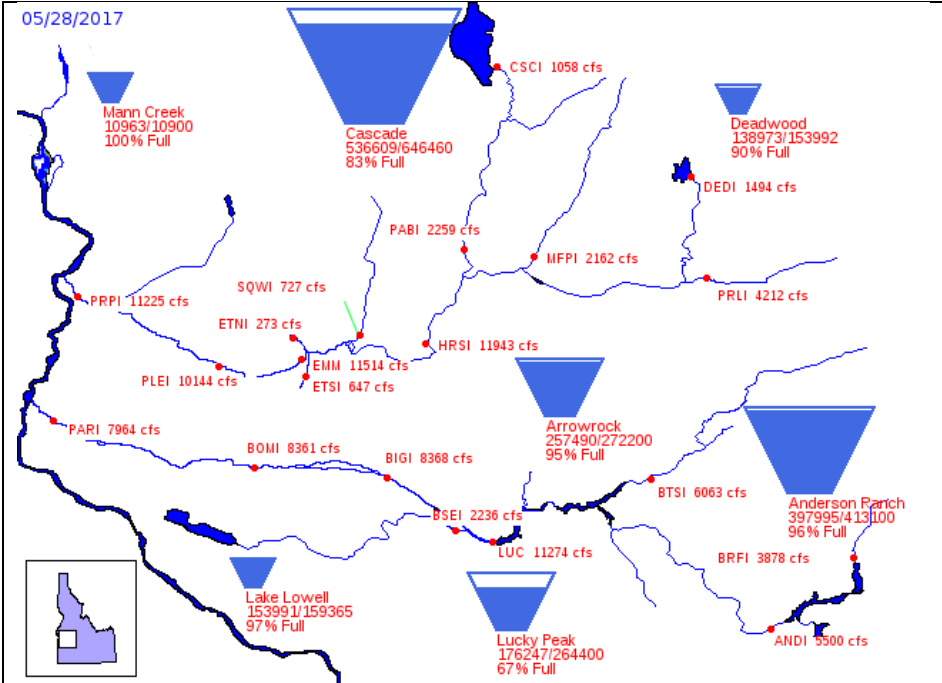
In accordance with tradition and in the most recently encouraging words of the almighty & omnipotent RiverDude, “Stay tuned!”

Steve

PS - The “Stay Tuned” admonition has been downgraded to a one-point exclamation – from the recent 10-pointer – on account of the recent southerly hook by That Pesky Blue Line and the RiverDude’s optimistic light at the end of the tunnel.



Boise System Review
For the Week of
May 29, 2017 (Holiday Version)
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 88% of capacity.
Total space available: 117,968 AF
Total storage capacity: 949,700 AF
Natural Flow: 11,788 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, May 29, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	28.4	10.2	278	60.1	38.4	157
Bogus Basin	6340	2.0	0.0 _c	*	39.6	27.4 _c	145
Camas Creek Divide	5710	–M	0.0 _c	*	–M	19.6 _c	*
Dollarhide Summit	8420	23.4	N / A	*	48.9	31.3	156
Graham Guard Sta.	5690	–M	0.0	*	–M	26.3	*
Jackson Peak	7070	23.5	11.1	212	60.8	38.7	157
Mores Creek Summit	6100	0.0	0.7	0*	61.4	40.3	152
Prairie	4800	0.0	0.0	*	26.7	19.3	138
Trinity Mtn.	7770	43.6	26.6	164	71.7	45.8	157
Vienna Mine	8960	48.7	21.2	230	57.1	35.6	160
Basin Index (%)		209*			154		

Legend -“-M” = Missing data. “C” = Conditional, only 10-19 years of data available.

“*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Summary: That Pesky Blue Line continues with Holiday gyrations and the river continues coursing relatively unabated toward Astoria. The year’s finale appears to be organizing in the wings.

Last week, storage crept up a mere three points to 88% of capacity (a decrease of 24,000 ac-ft). Inflows, up 3,000 cfs, are now close to matching outflows. The system is generally on an even keel. The remaining outlier is that pile of high snow that continues to hang at elevations over 7,000 ft. The SNOTEL report shows we continue to enjoy a little over 200% of normal, up high (Yellow highlights). This week’s warm weather will affect that.

Last week’s discharges out of Lucky Peak have held generally flat at 11,000 cfs, while the decreases at Glenwood can be attributed to the 15% irrigation demand increase. Thanks to the irrigators, flows at Glenwood continue to ebb.

On Monday, the Corps declared the approaching end to high water season by sending up the flyboys to capture high water imagery from the Snake, below Parma to Lucky Peak. The mere notion of camera-laden planes set off a mad scramble, as crews grabbed their GPS instruments and tagged high water marks from I-84 to Eckert. The results could end up being the most reliable high-water data set that we’ve yet seen for the Boise River.

In addition to the Corps’ “look-down,” good ol’ Leo, The Lion-Hearted, created a spectacular portfolio of the Boise River from Caldwell to Boise. Great stuff! → →

The 2017 event has put the river into a number former flood plain gravel mines. Two holes in the ground, one between Eagle and Star and the other near Caldwell, are going to take a fair amount of effort - once the river recedes - to get things back to where “the river’s supposed to be.” On a positive note, we did encounter one former mine near Star, where Karl Gebhardt’s “Subsurface Weir” design got high marks for superb design. His concept could (and should) be the wave of the future.

Finally, with the Corps flight calling the season’s intended maximum high water event, a number of local wags (including yours truly) are having a time reconciling why higher flows didn’t course the Valley with all that wonderful snow. “Aquaman” came through with the best explanation possible. He proclaims, “What the heck can you expect, if you all are going to rely on the PDOOMA method?” He’s got a point.
<http://tinyurl.com/ybkv55bc>

We’re hearing singing from the hills to the East. The finale’s in the wings.

In accordance with tradition, “Stay tuned!”

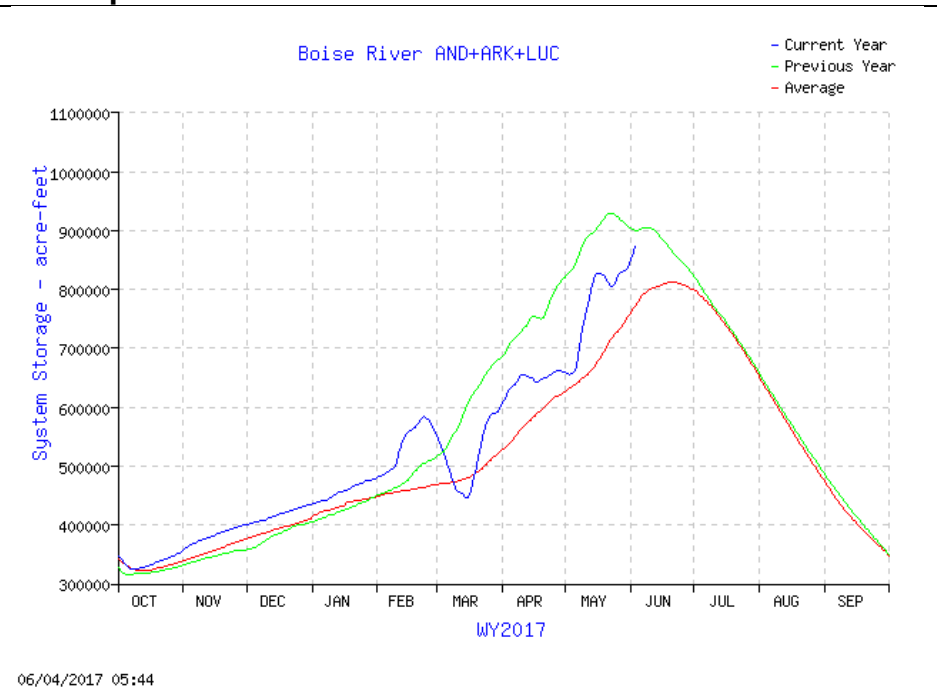
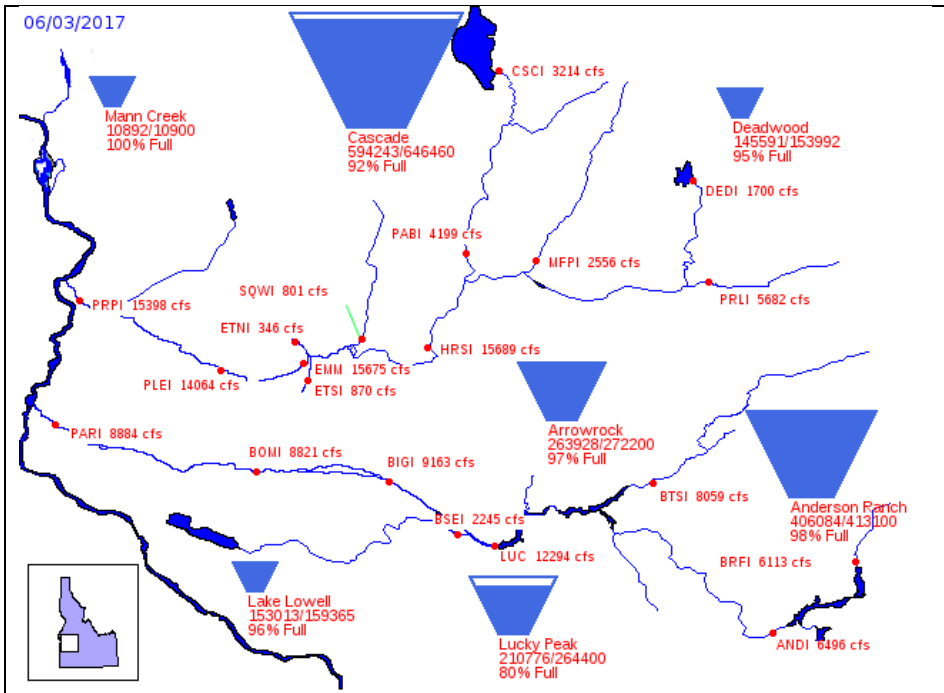
Steve

Current and Previous Copies of the Boise System Review are here: <http://www.quadrant.cc/runoff-review.html>



Leo, the Lion-Hearted’s “XL Ranch-ellent” view of the Boise River.
(Idaho Airships, Inc.; May 23, 2017; 8,680 cfs @ Glenwood.)

Boise System Review
For the Week of
June 5, 2017
Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 93% of capacity.
Total space available: 68,912 AF
Total storage capacity: 949,700 AF
Natural Flow: 15,623 CFS

Idaho SNOTEL Snow/Precipitation Update Report
Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for Monday, June 05, 2017

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
BOISE BASIN							
Atlanta Summit	7580	16.9	3.2	528	60.1	39.1	154
Bogus Basin	6340	0.0	0.0 _c	*	39.6	27.9 _c	142
Camas Creek Divide	5710	0.0	0.0 _c	*	30.3	20.1 _c	151
Dollarhide Summit	8420	8.9	N/A	*	48.9	32.0	153
Graham Guard Sta.	5690	0.0	0.0	*	43.8	27.0	162
Jackson Peak	7070	14.0	3.9	359	61.0	39.6	154
Mores Creek Summit	6100	0.0	0.0	*	61.5	41.1	150
Prairie	4800	0.0	0.0	*	26.5	19.8	134
Trinity Mtn.	7770	34.8	21.0	166	71.7	46.7	154
Vienna Mine	8960	39.0	17.4	224	60.5	36.4	166
Basin Index (%)		230*			153		

Legend -“-M” = Missing data. “C” = Conditional, only 10-19 years of data available.

“*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>

Summary: That Pesky Blue Line stays on Holiday and continues heading North, as the High Snow hangs on.

Last week, storage crept up another 5 points, putting us now at 93% of capacity (a decrease of 49,000 ac-ft of available storage over the last week). Inflows, bouncing between 12,000 to 19,000 cfs, continued to deplete storage by 7,000 ac-ft per day. The SNOTEL report shows we continue to enjoy a snow pack of 230% of normal -generally the high snow over 7,000 ft (yellow highlights). This upcoming week’s roller coaster weather will affect that once again with a peak Natural Flow pegged at 17,000 cfs predicted for Monday, followed by a tapering run (<http://tinyurl.com/yd5a5yfe>). Local wags, including retired Regional Engineers, City Engineers of all stripes (retired and recently appointed) along with their staffs, soon-to-be-retired engineers and run-of-the-mill, worry-warts continue to tumble numbers and scratch their collective heads about where this season’s heading.

On May 22, the Corps unofficially declared the beginning of the end of the flood threat by sending up a plane to document the high water (8,890 cfs on 5/17 according to the USGS Glenwood gage). A General even came to town to make the perfunctory rounds. In an apparent fit of giddiness, at 8 am the next morning Lucky Peak discharges dropped 500 cfs. In a similar fit of jubilation, irrigation gates, up and down the river, were reset based on the newly lowered flows. But... somewhere around 2 pm that afternoon, that dang 500 cfs suddenly reappeared unannounced out of Lucky Peak. Irrigation ditches, already running near max capacity started rising, catching the irrigation community - from the RiverDude on down - a bit flat-footed. Long & short of the matter, we escaped without running a canal over and creating a wide-spread soaking of urban areas. That whole event bristled things up along with calls for better communication up and down the system. The underlying message: “We’re all in this together.”

Since the “Great Miscommunication,” through the remainder of the week, river things have gotten a little more bristly. The Corps announced increases, dutifully recorded by the Lucky Peak gage, but the Glenwood gage stubbornly held steady, while folks all around the head of Eagle Island and in downstream mobile home parks, started seeing rising water. Turns out, that Pesky Glenwood Gage needed another visit from the USGS field crews. Following a Saturday rating (Thanks for getting the crew out on Saturday!), the gage was adjusted and we had a new record. All the while, the rural land owners down in Canyon County bide their time and patiently wait out this event. That’s a stalwart bunch down there.

Record, schmecord. Here are some interesting “Thru June 4” figures out there, for those that are counting: Number of Flood Control days so far in 2017: 112 days; Number of days at or above flood stage (7,000 cfs): 90 days; 1.68 maf of flood flows past Glenwood (compared to 1.67 maf for the same period in 1943 – the “Mother of All Floods”); maximum daily discharge at Glenwood: 9,410 cfs, which pales compared to ’43’s 20,500 cfs at Capitol, but is within spittin’ distance of the ’83’s post-dam record of 9,560 cfs at Glenwood.

Interesting to note that having proclaimed an unofficial “End of High Water” and having sent the plane up to document the river at ~8,900 cfs, the Feds have apparently run short of funds in “\$4.6 billion in discretionary funding” (<http://tinyurl.com/y86xjy6n>) for any further documentation of this year’s epic event. While there’s only a 10% chance we’ll hit 10,000 cfs (<http://tinyurl.com/yc85iqhz>), tentative plans for a local solution are afloat.

Finally, the Mountain Guru will publish the NRCS June Idaho Water Supply Outlook Report early next week. The audience awaits with bated breath.

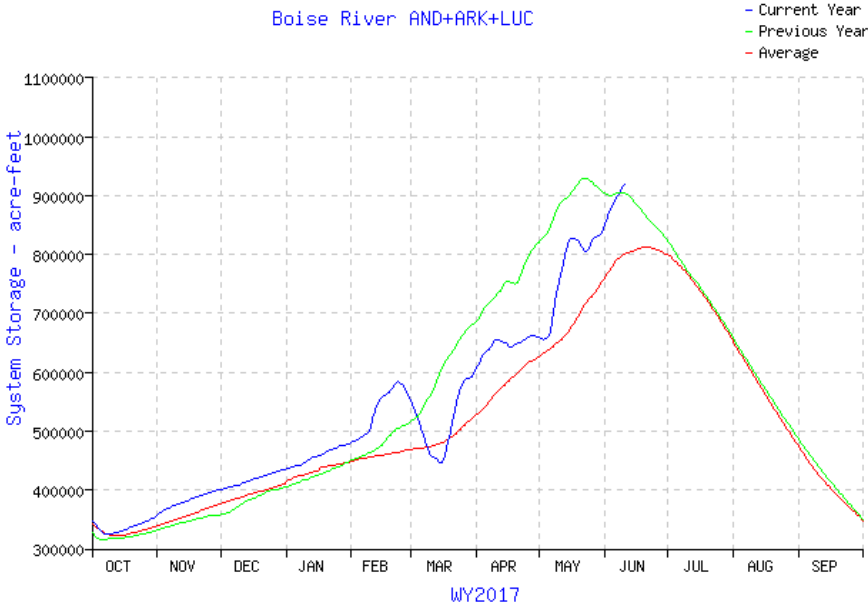
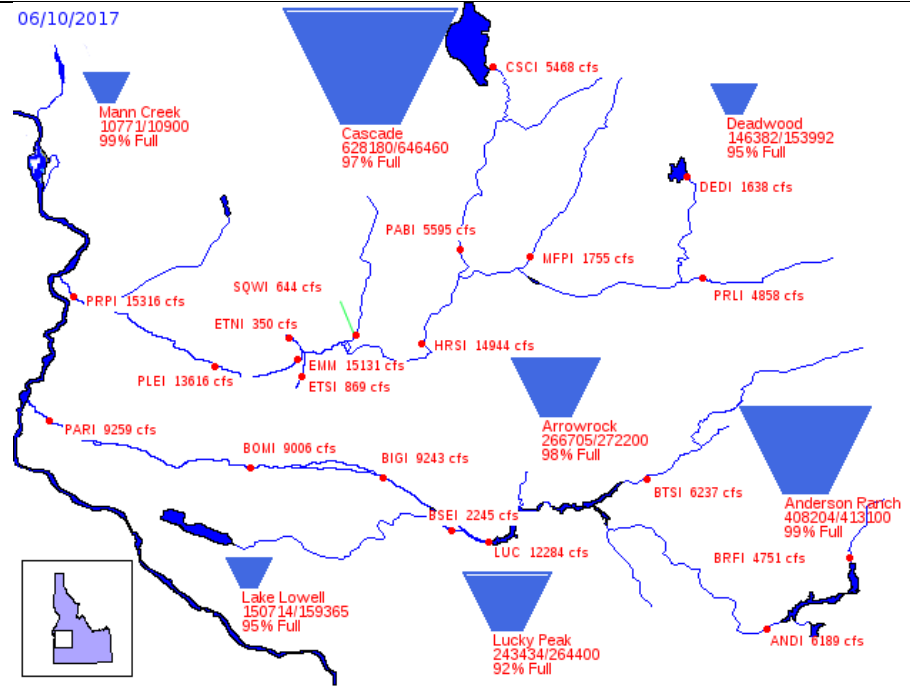
In accordance with tradition, “Stay tuned!”

Steve

Current and Previous Copies of the Boise System Review are here: <http://www.quadrant.cc/runoff-review.html>

Boise System Review
For the Week of
June 12, 2017 (Curtain Call!)

Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>

http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 97% of capacity.
Total space available: 31,357 AF
Total storage capacity: 949,700 AF
Natural Flow: 12,328 CFS

Idaho SNOTEL Snow/Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

Data based on the first reading of the day (typically 00:00) for
Sunday, June 11, 2017

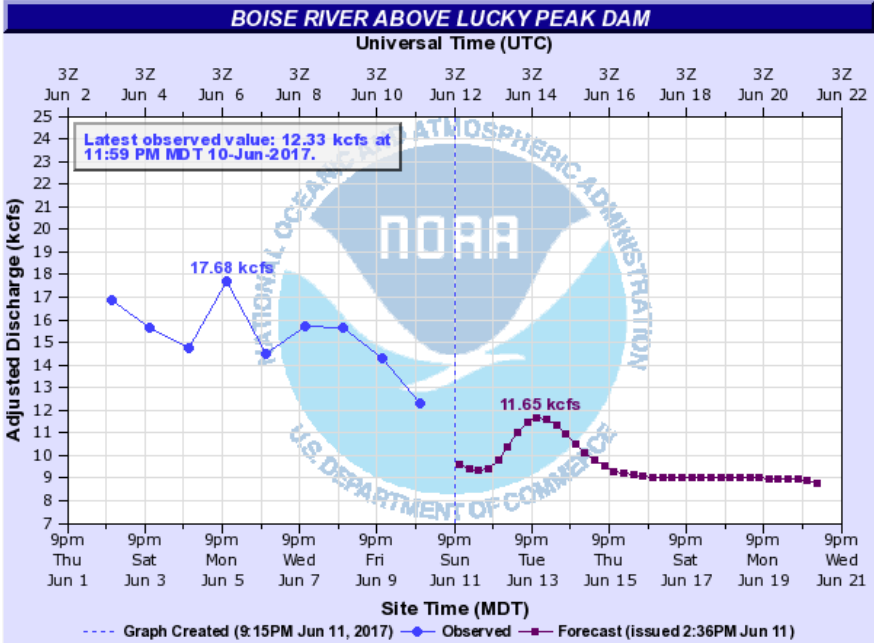
Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to- Date Precip		
		Curr. (in)	Med. (in)	Pct of Med.	Curr. (in)	Avg (in)	Pct of Avg
BOISE BASIN							
Atlanta Summit	7580	8.8	0.0	*	60.1	39.6	152
Bogus Basin	6340	0.0	0.0 _c	*	39.8	28.5 _c	140
Camas Creek Divide	5710	0.0	0.0 _c	*	30.4	20.4 _c	149
Dollarhide Summit	8420	0.2	N / A	*	48.9	32.6	150
Graham Guard Sta.	5690	0.0	0.0	*	43.8	27.5	159
Jackson Peak	7070	7.5	0.0	*	61.6	40.2	153
Mores Creek Summit	6100	0.0	0.0	*	61.6	41.6	148
Prairie	4800	0.0	0.0	*	26.5	20.1	132
Trinity Mtn.	7770	28.1	14.7	191	71.8	47.4	151
Vienna Mine	8960	31.6	13.5	234	60.5	37.0	164
Basin Index (%)		270*			151		

Legend -“-M” = Missing data.

“C” = Conditional, only 10-19 years of data available.

“*” = Analysis may not provide a valid measure of conditions.

<http://wcc.sc.egov.usda.gov/reports/SelectUpdateReport.html>



Here’s a new graphic on these pages. This is the Weather Service’s projection on flow in the Boise River basin. According to the website: “The blue dots represent the estimated daily average natural inflow to the Boise River system above Lucky Peak Dam. The 7 day forecast is for total Boise River natural inflow above Lucky Peak Dam. This includes the Boise River South Fork, Middle Fork, North Fork, Mores Creek and other ungauged small tributaries.” Projections for the upcoming days show that the snow is about done coming out.

<https://water.weather.gov/ahps2/hydrograph.php?wfo=boi&gage=luci1>

Summary: That Pesky Blue Line appears to be continuing on a tear, but the sucker is running out of steam - and is dead – it just don’t know it yet. With 31,400 ac-ft of reservoir space remaining and the system being 97% full, inflows above the dams have decreased to the point that the Corps dispatched a missive today declaring that Lucky Peak discharges will be decreasing by 500 cfs between Sunday and Monday. It might be raining in the hills, but apparently there just isn’t enough snow to tip this thing over. After 118 days of flood control (and counting!) and 1.78 maf of flood control releases (the equivalent of filling the system 1.9 times – as of today), this has indubitably been a year of note. Once flows at Glenwood drop below flood stage at 7,000 cfs, we’ll take a moment to put this all in perspective and look back at how 2017 compared to prior big years.

For now though, that’s it, Runoffers. *The Fat Lady Sings!*

Thanks to the RiverDude (Rex Barrie), the Snow Guru (Ron Abramovich), Ada County’s Chief Worrier-in-Chief (Doug Hardman) and all you scurrilous wags that mailed in your snarky commentaries on a regular basis. This has certainly been a memorable event.

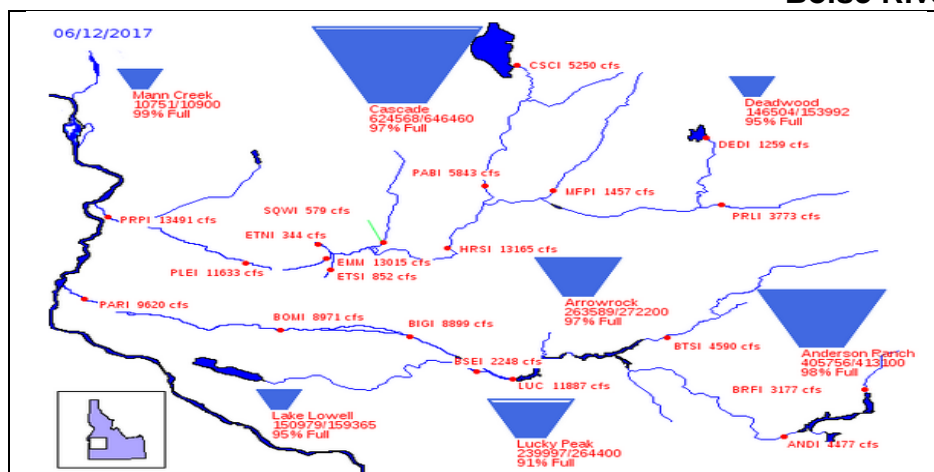
In closing, instead of channeling the RiverDude (“Stay Tuned!”), we’ll heed the words of the beer-goggled Snow Guru, as he peered into our 2018 water season: “Watch out for next year!”

Heck, it’s been real, it’s been fun, and it’s even been real fun. See you all next high water season.

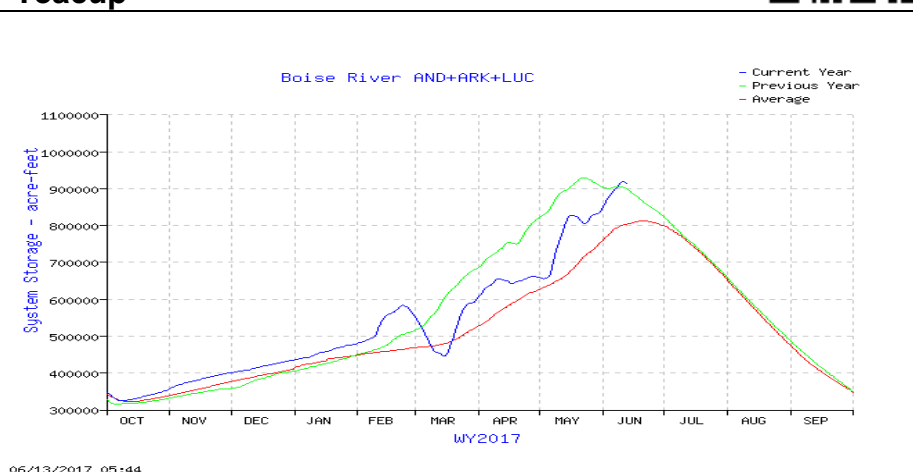
Orenout,
Steve



Boise System Review For the Week of June 13, 2017 (Curtain Call!- cont.) Boise River Teacup



<http://www.usbr.gov/pn/hydromet/boipaytea.html>



http://www.usbr.gov/pn-bin/graphwy.pl?boisys3_af

Boise River system (Anderson Ranch, Arrowrock, Lucky Peak) is at 96% of capacity.

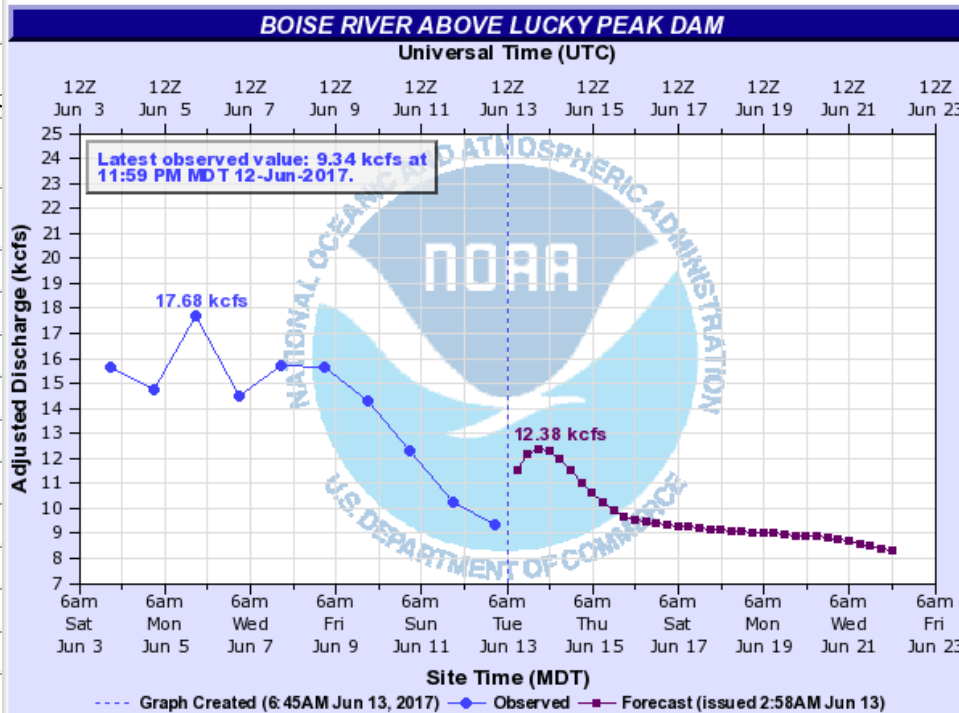
Total space available: 35,297 AF

Total storage capacity: 949,700 AF

Natural Flow: 9,336 CFS

Idaho SNOTEL Snow/Precipitation Update Report, 6/13/17

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Prec		
		Curr. (in)	Med. (in)	Pct of Med.	Curr. (in)	Avg (in)	Pct of Avg
BOISE BASIN							
Atlanta Summit	7580	7.9	0.0	*	61.1	39.8	154
Bogus Basin	6340	0.0	0.0C	*	41.5	28.6C	145
Camas Creek Divide	5710	0.0	0.0C	*	30.8	20.5C	150
Dollarhide Summit	8420	0.2	N/A	*	49.5	32.8	151
Graham Guard Sta.	5690	0.2	0.0	*	44.6	27.6	162
Jackson Peak	7070	6.8	0.0	*	62.8	40.3	156
Mores Creek Summit	6100	0.0	0.0	*	63.0	41.8	151
Prairie	4800	0.1	0.0	*	27.2	20.2	135
Trinity Mtn.	7770	27.2	12.8	212	72.7	47.6	153
Vienna Mine	8960	31.8	12.0	265	61.3	37.1	165
Basin Index (%)		298*			153		



Boise System Review

For the Week of
June 13, 2017 (Curtain Call!- cont.)



Summary: That Pesky Blue Line had quite a tear, but the sucker has run out of steam - and is dead – it just don't know it yet. The peak is now and final fill is on our horizon.

With 35,300 ac-ft of reservoir space remaining and the system at 96% full, inflows above the dams have decreased to the point that the Corps have dropped outflows over three consecutive days by a total of 700 cfs. It might be raining in the hills, but there just isn't enough snow to tip this thing over.

After 120 days of flood control (and counting!) and 1.82 maf of flood control releases (the equivalent of filling the system 1.9 times – as of today), this has indubitably been a year of note. Once flows at Glenwood drop below flood stage at 7,000 cfs, we'll take a moment to put this all in perspective and look back at how 2017 compared to prior big years.

For now though, that's it: *The Fat Lady Sings!*

In closing, instead of channeling the RiverDude ("Stay Tuned!"), we'll heed the words of the beer-goggled Snow Guru, as he peered into our 2018 water season: "Watch out for next year!"

