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United States
Department of
Agriculture

Farm and Foreign
Agricultural Services

Risk
Management
Agency

Spokane Washington
Regional Office

11707 E Sprague Ave.
Suite 201
Spokane Valley, WA
99206-6125

509 228-6320
FAX 509 228-6321

TO: Robert Ibarra, Director
Risk Management Services Division

FROM: Dave P. Paul /s/ *Dave P. Paul*
Director

SUBJECT: Regional Irrigation Information for Spokane Region

In order to identify areas and water districts where inadequate irrigation water supply is suspected, the following information includes the areas that the Natural Resource and Conservation Service (NRCS) has identified as having reduced water availability. RMA has not confirmed any water reduction was due to an insurable cause of loss within the insurance period or made any determinations but is providing information it has gathered for Approved Insurance Provider's reference:

Idaho

Here are links for more info about Idaho and individual basins from NRCS's SWSI web page: <http://www.id.nrcs.usda.gov/snow/watersupply/swsi-main.html>

Upper Snake Basin: The Teton River near Driggs is forecast at 68 percent of average, while the Henrys Fork near Rexburg forecast is 82 percent. Adding Heise's 50 percent exceedance forecast to the March 31 reservoir storage levels in Jackson Lake and Palisades provides a total available surface water supply of 4,137,000 acre-feet. Spring precipitation and summer temperatures will be the critical wildcards to determine onset of irrigation and summer demand levels.

Southside Snake River Basins: April 1 snowpack's are 85 percent of median in Salmon Falls, 80 percent in Goose and Trapper Creeks, 72 percent in Bruneau and 39 percent in the Owyhee. The Owyhee basin reservoirs are the most full with Owyhee Reservoir 53 percent of its capacity and Wildhorse 40 percent full. Oakley reservoir is 34 percent full and Salmon Falls is only 21 percent full. Note: The Owyhee Basin includes Malheur County, Oregon.

Bear River Basin: The best forecasts are for the Smiths Fork and the Bear River near the Utah-Wyoming state line, each at half of normal. Most other forecasts are 25-45 percent of average, except the Bear River below Stewart Dam forecast at just 8 percent of average. Bear Lake is 126 percent of the 1981-2010 average, 65 percent full. Water users dependent on natural stream flow should be prepared for another dry summer.

Wood & Lost Basins: On January 1 water year to date precipitation across these basins was 136 percent of average, and much of that precipitation had fallen as snow in these

high mountains. January 1 snowpack's were 133-163 percent of normal. Unfortunately, this year's January – March period has set new records for mid-winter dryness at eleven SNOTEL sites, another four SNOTEL sites just had their second driest mid-winter period on record. The April–September 50 percent exceedance forecast for the Big Wood River above Magic is for 167,000 acre-feet, 63 percent of average. Little Wood water users appear to be in good shape thanks to excellent reservoir storage.

NRCS stated that this year more users and irrigation districts are hedging towards the lower forecast (70 percent chance of exceedance) based on lack of response in streams from snowmelt so far, and now that we are more than half way through April, it looks like another month of below normal precipitation is likely, at least across parts of central and southern Idaho.

Please see the attached Surface Water Supply Index report for April 1st in Idaho.

Oregon

Klamath Basin, Southern and Eastern Oregon basins are expected to have the lowest summer streamflows in the state as a result of extended dry spells, low snowpack's and early snowmelt. Areas of concern for well below normal summer streamflows are the Owyhee, Malheur, Harney, Klamath, Lake County and Oregon's closed basins. The latest drought monitor update has outlined expected drought to continue in the regions of southern and southeastern Oregon.

The snowpack in the Malheur and Owyhee basins is 42 percent of normal, the lowest in the state. Mountain snowpack in other parts of southern and eastern Oregon such as Lake County, Klamath, John Day, Harney and Oregon's closed basins are only slightly better, ranging from 55 to 67 percent of normal. Many SNOTEL sites in these areas are already snow free and the mid to upper elevations are melting off quickly. Many parts of these basins have melted about two weeks earlier than normal. In response to these drought conditions, a drought declaration has already been issued by the Governor of Oregon.

Summary

According to the NRCS data, the counties which may be affected by potential irrigation water shortages at this time are:

Idaho: Blain, Bonneville, Camas, Cassia, Madison, Owyhee, Teton and Twin Falls

Oregon: Klamath and Malheur

We will continue to track summaries of the streamflow forecast probabilities, basin area reservoir supplies, and SNOTEL data from the Water and Climate Center of the NRCS and inform the Administrators Office of any deteriorating conditions. We encourage

insurance providers to notify the Spokane Regional Office immediately of any other counties or areas of suspected irrigation water shortages.

If you have questions, please call our office at 509-228-6320.

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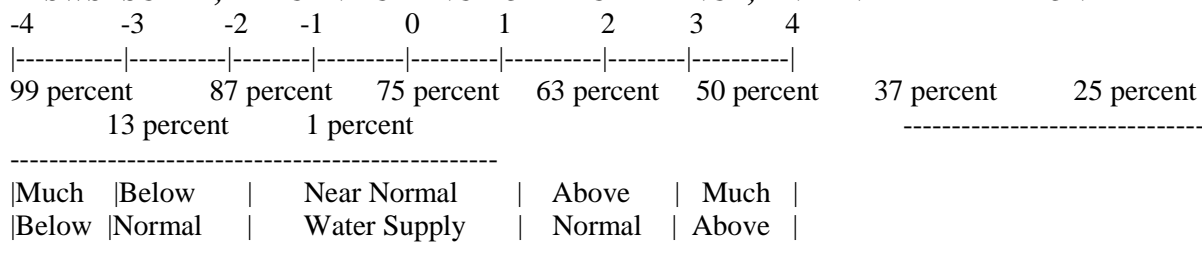
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) April 1, 2013

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled **from +4.0 (abundant supply) to -4.0 (extremely dry), with a value of zero indicating a median water supply** as compared to historical occurrences. The SWSI analysis period is from 1981 to present.

SWSI values provide a more comprehensive outlook of water availability by combining streamflow forecasts and reservoir storage where appropriate. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been determined for some basins to indicate the potential for agricultural irrigation water shortages.

BASIN or REGION	SWSI Value	Most Recent Year With Similar SWSI Value	<i>Agricultural Water Supply Shortage May Occur When SWSI is Less Than</i>
Northern Panhandle	-0.3	2000	NA
Spokane	-1.5	2007	NA
Clearwater	-0.3	2004	NA
Salmon	-1.5	2004	NA
Weiser	-1.8	2004	NA
Payette	-1.8	2002	NA
Boise	-2.0	2007	-2.1
Big Wood	-1.3	2007	-0.1
Little Wood	-0.5	2010	-1.6
Big Lost	-0.5	2005	0.4
Little Lost	-1.5	2000	1.1
Teton	-2.0	2000	-3.9
Henry's Fork	-1.0	2004	-3.2
Snake (Heise)	-1.8	2007	-1.6
Oakley	-0.5	2010	-0.4
Salmon Falls	-1.8	2008	-1.1
Bruneau	-0.5	2008	NA
Owyhee	-3.0	2001	-3.4
Bear River	0.2	2001	-3.4

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION



NA=Not Available / Not Applicable; Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12 percent of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87 percent of the time and less than -3.0, 13 percent of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36 percent) of the time.