

Digging out of drought

By **BRODIE FARQUHAR**

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Wyoming ranchers have faced a mixed bag this summer and fall when it comes to precipitation.

Hamstrung by an eight-year drought and low snow pack in the mountains, the Wyoming ag community was both heartened and dismayed by storms that would bless one drainage and miss the neighbors.

State Climatologist Steve Gray said the year did not start well for Wyoming, save for the northeast and the Big Horns, which got hammered by March and April storms.

What happened next in the southeast quadrant of the state was even more unusual, Gray said: significant rain events over the course of the summer.

It could have been a lot worse this year, without that unusual moisture, he said.

Still, he said, Wyoming isn't out of the woods, with the Cowboy State still in the grips of a long-term hydrologic drought, now likely to head into its ninth year. Many of the state's reservoirs still have low water levels. As nice as it was to have monsoonal summer storms, deep snow pack in the high country would be even better for the state, Gray said.

Summer rains can disappear all too quickly downstream, he said, and don't do much to penetrate very far into the soil profile. As a result, summer rains soak only a few inches into the topsoil, allowing short-rooted plant species including cheat grass to flourish while deeper-rooted plants struggle.

Gray said he has seen reports from neighboring South Dakota that the plant mix on the prairie is changing to favor shallow-rooted plants over the deep-rooted species, thanks to a continuing drought and summer rains.

Skip Waters, a Moorcroft-area rancher, said pastures greened up nicely after spring snows and rains, but then came hot, dry weather and a month of 100-degree temperatures. As a result, northeast Wyoming ranchers had green spring pastures and poor hay crops.

Waters acknowledged that fall rains have greened up the range some, but we're not out of the woods yet.?

Gray said Wyoming's southwest quadrant caught very few breaks this year. Starting from the Pinedale area and north, ranchers picked up some moisture, he said, but nothing compared to the summer soakers in the southeast and northeast.

Neils Hansen, who ranches west and southwest of Rawlins, said summer precipitation varied widely in his neighborhood, where some neighbors came through real good and others are pretty tight on water supplies.

Hansen said he managed to grow some good feed, but areas west of him have been pretty dry.

It really has been a bumper year for weeds, he said.

Gray said he's anticipating some exciting research coming out of efforts to cloud-seed the Wind River Range and Sierra Madres this winter, as a way to encourage the development of deeper snow packs. One researcher is going to fly in the clouds as they're seeded, then track by radar whether the silver iodide grains trigger formation of snow crystals.

Another research program will try to figure out the natural variability of winter storms and snow packs, as a way to better understand what cloud-seeding is accomplishing, Gray said.

Fremont County rancher Rob Hellyer should be glad for any help he gets with snow pack up in the Winds – that's the ultimate source of his irrigation water in Lyons Valley near Lander. Three good spring storms helped green up the valley, while late July rains helped with irrigation.

Trouble is, Hellyer said, not everyone got those rains.

At least we didn't have any grasshoppers,? he said, referring to one silver lining associated with lower snow pack.

Gray said the Pacific Ocean is squarely in a moderate La Nina condition, normally meaning more snow and runoff for the northwest quadrant of Wyoming and a 50-50 wash for the rest of the state, whether there's more or less snow than normal.

Gray's colleague, Mark Svoboda of the National Drought Mitigation Center in Lincoln, Neb., agrees that the western third of Wyoming should get more snow this winter.

Wyoming is something of a transitional zone, Svoboda said, with west of the Continental Divide expecting more snow this winter, and worse conditions east of the Divide.

Winter precipitation forecasts are a crapshoot, said Gray, who's taking a wait-and-see attitude.

The big question today, he said, is how to define normal in the midst of a multiyear drought and growing concerns about global climate change.