

Report: Climate change puts Valley at risk

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Reporter

Imagine a San Joaquin Valley with hotter, longer summers, more drought/rain extremes and a lot less snow in the mountains.

That's the picture you're going to see as the 21st century progresses because of global warming, according to a report released Thursday by the Risky Business Project, which studies the economic risks of climate change.

The report looks at impacts to major California industries, with a lot of focus on the state's \$45 billion ag economy and its epicenter, the San Joaquin Valley.

In making its projections, the report's authors assume that political and business leaders don't take serious steps to rein in the global emissions most scientists believe are driving warming temperatures.

The prediction is for a likelihood of many more 95 degree-or-above days in the Valley. How many more than the current average of 44 days a year? Try an increase to 63-85 days by 2050 and 90 to 133 days — more than four months — by 2100.

That means more air pollution due to more ozone formation and an increased probability of wildfires. It also means a soaring air conditioning bill for residents in California's fastest-growing region.

For farmworkers, the report predicts lower productivity due to dangerously hot conditions in the fields. Along with that, the study foresees more heat-related on-the-job health effects.

The report also says that by late century, there could be more than 800 heat-related deaths a year.

The report also outlines significant anticipated impacts to major Kings County products such as milk, almonds, alfalfa, cotton and silage corn.

Irrigation availability is expected to decrease as precipitation shifts away from snow to more intense and widely separated rain storms.

California's water system is geared toward having a big snowpack on April 1 that slowly melts during the summer, when irrigation demand is highest.

The report predicts that climate change will exacerbate droughts by making them hotter. That means a good chance that the extreme conditions of 2014-15 — which can't necessarily be attributed directly to climate change — will become more common.

To Kings County Farm Bureau President Dino Giacomazzi, that's a good argument to build more reservoir space to capture more water during heavy rain events.

"If the trend going forward is that the climate will be getting warmer, which will lead to less snowpack, then that's all we need to know to tell us to double or triple down on our reservoir storage capacity," he said. "The only choice we have is to increase storage."

The report predicts bad news for heat-sensitive cotton, Kings County's third most valuable commodity in 2013 with a

gross value of \$318 million. Estimates show likely yield decreases of 2 percent to 17 percent by mid-century and 10 percent to 43 percent by 2100.

Also a likely loser: Kings County's dairy industry, which cranked out \$773 million in 2013. As every dairy operator knows, higher temps cause cows to produce less milk.

Cherries — a crop farmed by state Sen. Andy Vidak, R-Hanford — are also likely to suffer due to fewer chilling hours that the trees need to rest and regenerate during the winter. The projected yield decline is more than 10 percent by 2040.

For almonds, it's not clear what the damage could be. Higher February temperatures could shorten the pollination period, but that could be offset by warmer springs and summers.

Some crops will likely thrive due to carbon dioxide fertilization. Wheat, one such plant, could see jumps of 6 percent to 14 percent in yield by 2050.

The report noted that its analysis doesn't include possible adaptations by farmers such as cutting water use and boosting yields at the same time.

The report also noted that farmers are very good at responding to changes in climate — a point echoed by Giacomazzi about his multi-generational dairy farm east of Hanford.

"We manage in accordance to the weather," Giacomazzi said. "We won't be doing anything different going forward than what we've been doing for the last 122 years we've been farming."

The report doesn't mention the possibility of building new dams. It suggests that government policy and industry practices need to change to reduce carbon emissions.

However, the report's authors don't specify detailed steps, preferring to leave that up to policymakers and business leaders.

"If policymakers and business leaders act now to reduce emissions and adapt to a changing climate, we can significantly reduce [the] risks," the report concludes.

The Risky Business Project is a partnership organized by former New York City Mayor Michael Bloomberg, former Treasury Secretary Henry Paulson and financier and environmentalist Tom Steyer to support independent research on disruptive global trends.

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