Improvement in predicting drought-busting atmospheric rivers

By Matt Weiser, Water Deeply

Atmospheric rivers are vital to western water supplies, yet until very recently they were poorly understood: difficult to predict and measure, and very hard for scientists to estimate where they would make landfall.

These are often erroneously called “pineapple express” storms, a term that applies to only a subset of atmospheric river events that originate near Hawaii. Most atmospheric river storms begin in the more distant tropical ocean and develop into a narrow band of strong winds that funnel huge quantities of moisture toward the West Coast of the United States. These storms are so wet that just a handful can account for half of California’s total winter precipitation.

New research in the last few years has uncovered some of the mystery behind atmospheric river storms, helping to predict storm timing and intensity. Now a new study by scientists at Colorado State University in Fort Collins has revealed a way to predict atmospheric river storms as much as five weeks in advance.

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