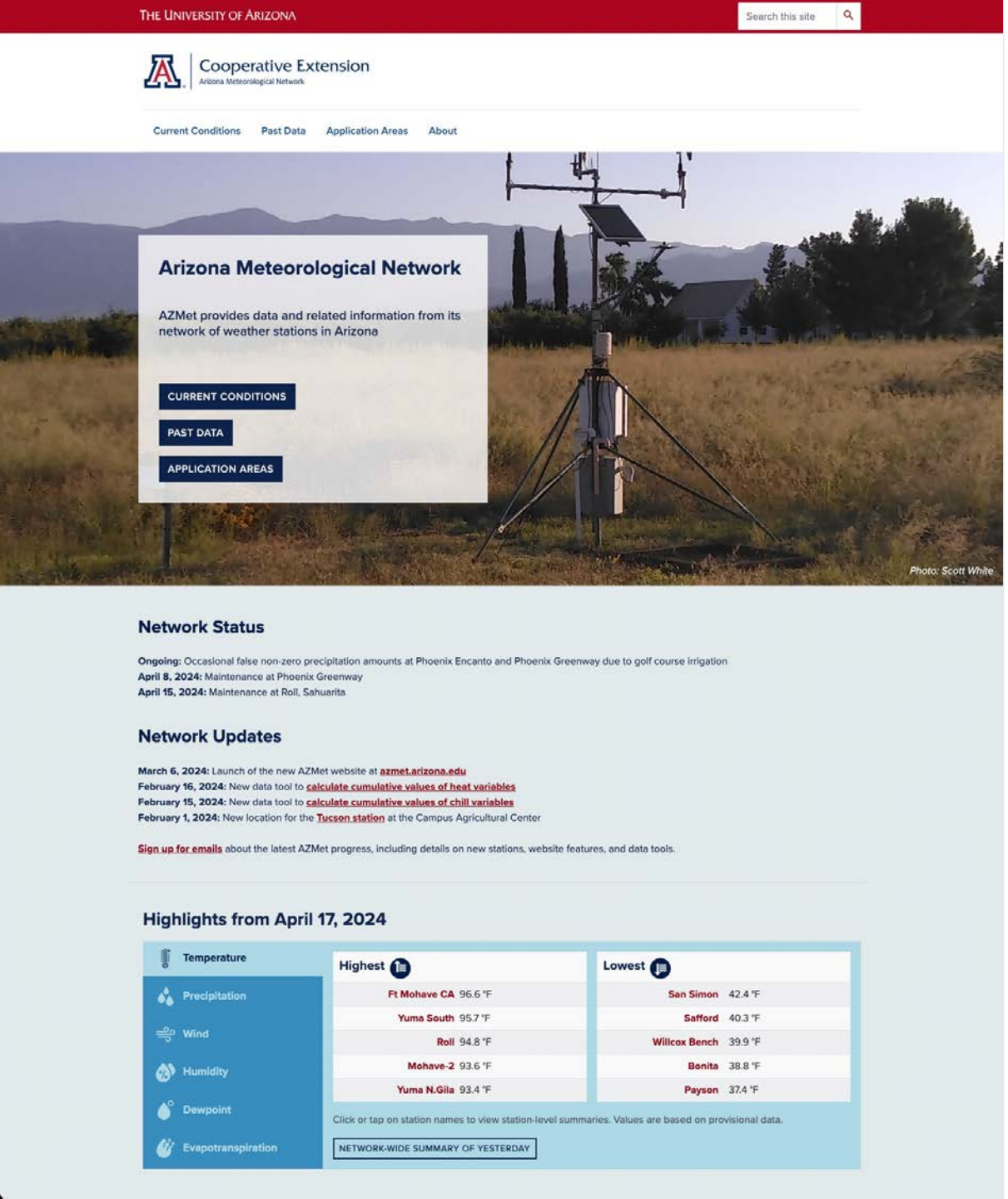
THE UNIVERSITY OF ARIZONA
Cooperative Extension
Arizona Meteorological Network

An Overview of the Arizona Meteorological Network

Jeremy Weiss, PhD AZMet Program Manager jlweiss@arizona.edu

San Simon station Photo: Scott White



New AZMet website

azmet.arizona.edu

Arizona Meteorological Network

AZMet at Present

Resources, part 1

- 30 active stations across western, central, and southern Arizona
- Measurements of air and soil temperature, humidity, wind direction and speed, precipitation, and solar radiation
- Calculations of chill hours, cotton heat stress, dewpoint, evapotranspiration, heat units, and vapor pressure
- Information on cotton growth stages, crop and turf water use, wine grape ripening conditions*

Station reliability

- Quarterly sensor calibration and additional clean-and-inspect visits
- Preventative replacement and upgrades of sensors and equipment

Resources, part 2

- Real-time observations updated every 15 minutes
- Database of hourly and daily values of both measured and calculated variables, with daily and monthly summaries and reports
- Real-time observations, past data, and summaries available on the new AZMet website: **azmet.arizona.edu**

Data quality and access

- Manual and automated checks for data validity, station communications and power, and faulty sensors
- A new, secure data system for collection, processing, storage, backup, and access (API, or application programming interface)

AZMet at Present

Recent highlights, part 1

- Developed an R package for programmatic access to the AZMet API: **uace-azmet.github.io/azmetr**
- Increased frequency of data collection from stations, which helped AZMet join the National Mesonet Program
- Added new automated quality checks of data coming in from the stations and into the database

Recent highlights, part 2

- Improved station communications with cellular signal and tower surveys and antenna upgrades
- Began measurements of two-minute sustained wind speeds at all network stations
- Began preventative replacement program for rain gauges

Current and upcoming activities

- Finish standardization of stations
- Modernize real-time data system and online resources
- Build new tools for checks on data quality and station communications and power
- Develop new online resources for station-level data, tools, and information

Who we are

- Jeremy Weiss, AZMet Program Manager
- Scott White, AZMet Research Professional
- Craig Boesewetter, CCT Senior Web Designer
- Matt Harmon, CCT Senior Web Developer
- Eric Scott, CCT Scientific Programmer

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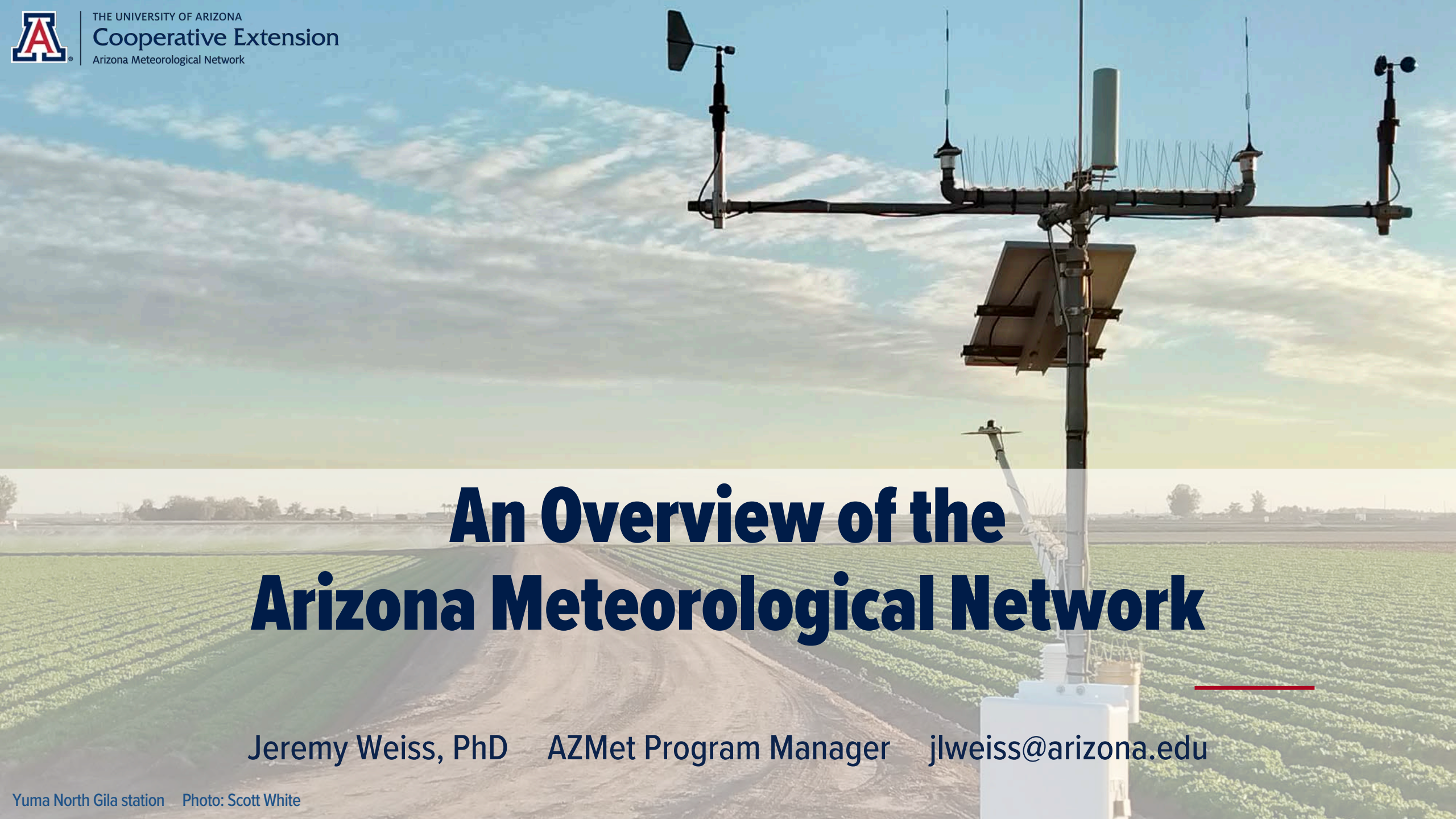

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Yuma North Gila station Photo: Scott White