

Detection and Prediction Group

(Modeling, Research, Observing systems, Spotter info)

GROUP QUESTIONS:

What are three short term (accomplished within 6 months) steps we can take to enhance our detection and prediction of dust storms?

What are three long term (accomplished 6-24 months) detection/prediction-related goals we should set to help bring a more permanent solution to the dust storm issue?

Short-term Steps (6 to 12 months)

1. Recruit spotters in strategic/vulnerable areas to form a “dust spotter” network.
2. Compile a partners list, especially those that can provide funding or grant assistance.
3. Develop a White Paper describing the outcome of this meeting (update from 1997 report).
 - 3a. Document and monitor land use data to learn trouble spots.

Long-term Goals (more than 1 year)

1. Continue the development of dust parameterization in high-resolution weather forecast models.
2. Develop methods to enhance the detection of dust areas and/or favorable antecedent conditions using data from new satellites.
3. Establish an Arizona mesonet.

Discussion Notes

Observation: many of fatalities associated with the local dust events versus the large-scale haboobs

Portable webcams

Text alerts from air quality sensors (Maricopa has, Pinal doesn't)

ADEQ to generate 5-day high risk for wind

Between 210 and 220

Better knowledge of crops and ag seasons

Image processing software to compare camera images with

LIDAR in California (fog management)

Sensors in automobiles

Talk with Paul Brown

Inexpensive home weather stations; include soil moisture, radiometer

Grant writing expertise

ADOT looking at more RWIS

Setting up local meso network

Well defined plan

Consortium (done in state of WA)

Determining land states (dynamic)

MODIS data are polar orbiting (2/day), gridded product is updated once a day

Expanding documentation of health hazards to elevate threat more than just traffic accident threat

Dust parameterization

Gridded NOAA product that shows last time it rained, based on radar