

# National Soil Moisture Network: Vision and Opportunities

# Who is the NSMNM?

## Appendix 2: Workshop Participant List



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# NSMN Leadership

# Vision

- Where do we want to be in 5 years?



# Vision

## Table 2: Soil moisture products

Possible requirements and examples of products discussed during the 2016 workshop.

Requirements:

- ◆ Temporal scales: Weekly, monthly, daily
- ◆ Spatial scales: Hydrologic Unit Code, census, state/county
- ◆ In situ Depths (cm): 2,5,10, 20,50,100
- ◆ Contextual data: SSURGO points, land cover, bench mark soils, National Hydrography Dataset, state, county
- ◆ All raw data behind maps should be available: time series, water year, etc.
- ◆ Data search features: state, basin, station, time periods, network, format

## Monitoring and Forecast Products:

- ◆ Volumetric water content
- ◆ Percent saturation
- ◆ Soil temperature daily average max, min
- ◆ Station map using U.S. Drought Monitor color scheme (e.g. weekly averaged percentiles)
- ◆ Percent of normal gridded and point product
- ◆ Probabilistic gridded product (e.g. non-exceedance probability)



## National Soil Moisture Network Workshop 2016 Progress made, future directions



# How do we get there?

- Leadership
- Funding
- Coordination and communication
- Logistics

# Possible Approaches: Lessons from the past

- 1) PRISM: “Build it and they will come”



- 2) CoCoRAHS: “Grass roots”



- 3) Oklahoma Mesonet: “Strong ground game”

# Next Steps

- Get involved!
- Take small steps
  - What can we do this year with the resources that we already have (expertise, time, technical capabilities)?
- Build momentum
  - Develop a short-term and long-term plan



# Possible Next Steps

- **Develop a soil moisture community of practice (CoP) that includes soil moisture data providers, groups that are developing products and tools, and users of the data and information.** The CoP would include citizen science initiatives and the private sector. Specific activities could include a “sensor challenge” for developing low-cost soil moisture/soil temperature probe alternatives, and developing case studies that highlight different approaches for integrating multiple sources of soil moisture data for specific issues and sectors.
- **Establish a working group to begin the process of developing a strategic framework for building an integrated national network.** The framework would consider issues around standardizing soil moisture measurements and metadata requirements, scale and spatial distribution for monitoring in observing networks, remote sensing platforms, and modeling efforts.
- **Develop a nationwide product from existing soil moisture data to demonstrate the potential usefulness of a coordinated effort.** The product and the investment of time by individuals who collect, process and store these data would guide how the process could be integrated on a broad spatial and temporal scale.

What do you think?