emi sig
EMERGENCY MANAGEMENT ISSUES SPECIAL INTEREST GROUP

Launching Emergency Management Leadership

Meteorological Tower "Base – ics"

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NNSS Mesonet Upgrade

- Last upgrade in 2003
- Obsolete / Unsupported Sensors

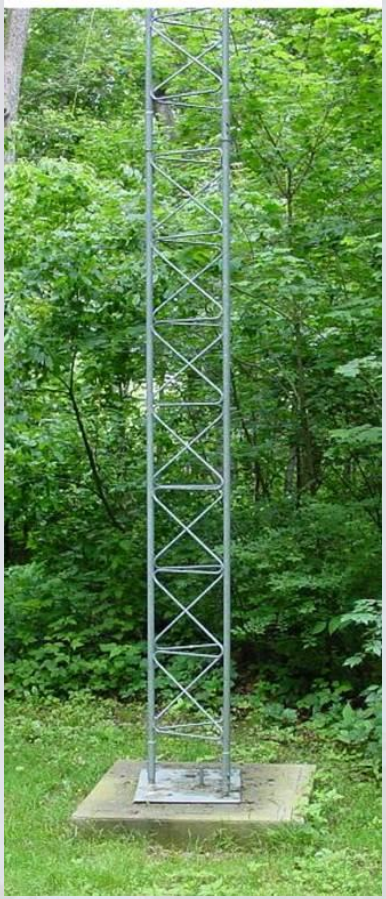
NNSS Mesonet Upgrade

- Equipment beyond life expectancy
- Reduce maintenance

Start with the "Base – ics"

- Solid Foundation
- New Towers
- Options:
  - Crank-up or Tilt-down
  - Fixed, Mobile, or a Combination
  - To guy or not to guy

“Simple Solution”

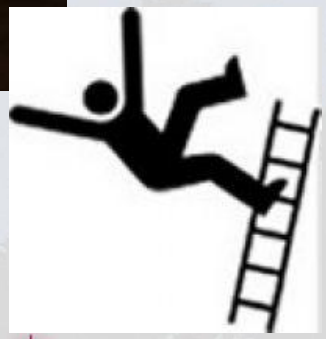


“Simple” Solution

- Or Mobile?

Criteria / Goals

- No climbing required (special training)
- No ladders (Fall hazard)
- Budget
- Digging restrictions
- Environmental
- Remoteness
- Accessibility



Reaching Out

- Contacted sister ARL offices
  - Field Research Division at INL
  - Atmospheric Turbulence and Diffusion Division at ORNL
- Contacted former sister ARL office
  - Earth System Research Laboratory
  - Surface Radiation Network (SURFRAD)

Ideas!!!

Ideas!!!

And More Ideas !!!

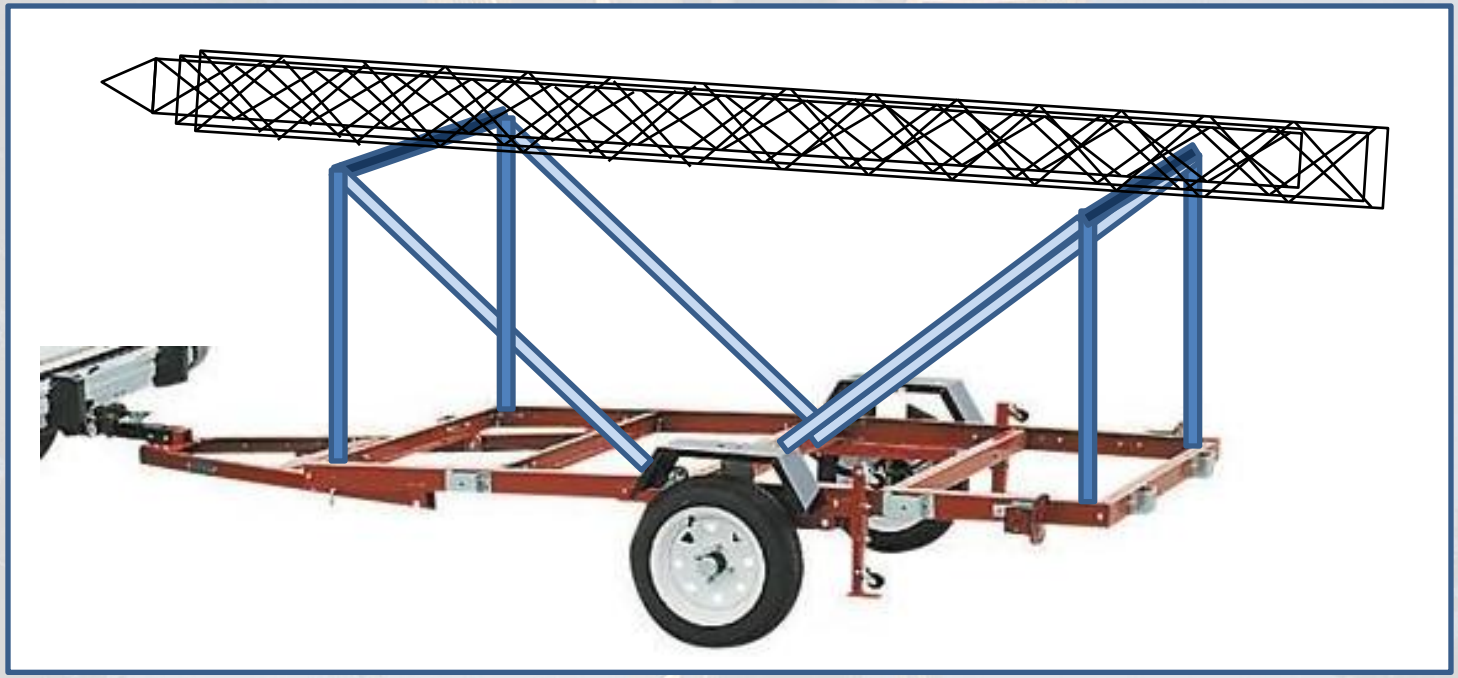
Our Design

- Major Design Factors
  - Tower base does not slip
  - Minimal surface disturbance

- Two Primary Designs
  - Semi-fixed
  - Mobile

Semi-fixed Design

Mobile Design



Thoughts?

- Send me your comments, please..

  walter.w.schalk@noaa.gov or schalk@nv.doe.gov
- Also, I would like to hear your preference in:
  - Sonic anemometers, 2-D or 3-D
  - Temperature/RH sensors
  - Data Loggers
  - Pressure sensors
  - Solar Radiation sensors