# **Air Resources Laboratory**



# Special Operations and Research Division (SORD-ID) Idaho Falls, Idaho

A division of NOAA's Air Resources Laboratory (ARL), the Special Operations and Research Division supports the DOE's Idaho National Laboratory (INL) for the DOE Idaho Operations Office. SORD's capabilities are in meteorology and atmospheric transport and dispersion. Local weather observations and predictions protect staff and facilities, especially for activities dealing with radioactive, explosive, or toxic materials.

#### **The Idaho Falls Division**

The SORD-ID division is composed of talented meteorologists, engineers, and technicians. Originally a part of the U.S. Weather Bureau, the division was created in 1948 for the purpose of describing the meteorology and climatology surrounding the area of the National Reactor Testing Station, now known as the Department of Energy's Idaho National Laboratory (INL). In a cooperative agreement between NOAA and the U.S. Department of Energy, SORD-ID's capabilities are used to support the INL with meteorological measurements, mesoscale modeling and forecasts, and atmospheric dispersion modeling in the event of an accidental chemical or radiological emergency at the INL.

# What We Do

SORD-ID's science helps advance the understanding of processes occurring in the atmospheric boundary layer (the layer of the atmosphere closest to and most influenced by the ground). Through meteorological data collection and analysis, and weather prediction and surveillance, SORD-ID supports INL Emergency Management, Environmental Compliance, and Site Operations to determine appropriate emergency actions, policy responses, and safety alerts. At the local level, SORD-ID's science specifically helps to ensure the safety of INL personnel and neighboring residents.

### **Meteorological Instrumentation and Mesonets**

SORD-ID has decades of experience designing, developing and deploying both permanent and temporary meteorological instrumentation, as well as establishing and operating mesonets (networks of meteorological monitoring towers and associated sensors). In a mesonet, instrumentation is carefully selected and a coordinated remote collection of these sensor data are conducted in order to obtain a high quality representation of the environment. Temporary mesonets are used in support of short-term experiments and studies, while permanent mesonets are used for long-term support of regulated facilities and for climate studies.



# **National Oceanic and Atmospheric Administration**

#### About ARL

NOAA's Air Resources Laboratory (ARL) researches the surface of the Earth from one meter below the soil up to 2,000 meters in the atmosphere (aka the boundary layer), a region which has a significant impact on people's health and safety, business, and the environment. ARL studies the physical and chemical, short- and long-term processes that occur in the boundary layer. In particular, ARL deals with the mixing, exchange, and transformation properties of energy, moisture, trace gasses, and particles, and in contributing inputs to meteorological models and forecast operations that are vital in improving weather forecasts. Primary applications include emergency response, homeland security, air quality, weather forecasts and climate outlooks, and commerce and transportation.

Front images, left: The NOAA INL Weather Center (NIWC) office monitors and sends weather watches, warnings, and alerts to INL employees and decision makers; right: Meteorological towers are a key measurement tool for weather conditions around INL; bottom: Idaho Mesonet map.

Back images: bottom: Idaho Falls offices and laboratories; right: Big Southern Butte Summit tower.





#### **For More Information, Contact:** NOAA/ARL SORD – Idaho

1750 Foote Drive Idaho Falls, Idaho, 83402 Phone: 208.526.2744 https://niwc.noaa.inl.gov



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