NOAA Climate Services User Engagement



CLIMATE AND WATER RESOURCES

VERVIEW

Water is fundamental to life and water resources are directly dependent on climate. Extreme weather events like droughts and heavy precipitation, which are expected to increase as climate changes, can impact water resources. Water supply imbalances or water quality degradation can have major societal impacts. Relevant climate information is essential to developing appropriate planning, response, and adaptation strategies.

YEY STAKEHOLDERS

NOAA engages various groups, both as an actionable information provider and as an applied research partner, to examine the effects of weather and climate on water resources:

Observed Drought Trends 1958 to 2007

Trends in end-of-summer drought as measured by the Palmer Drought Severity Index from 1958 to

- Federal, state, regional, county, and city water managers, planners, and drought task forces
- Federal water resource agencies, (e.g., NOAA, U.S. Geological Survey, U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, National Park Service, and the Federal Emergency Management Agency
- Agriculture, transportation, energy, and recreation industries
- Academia and other researchers







C ECTOR NEEDS

2007 in each of 344 U.S. climate divisions. Hatching indicates significant trends.

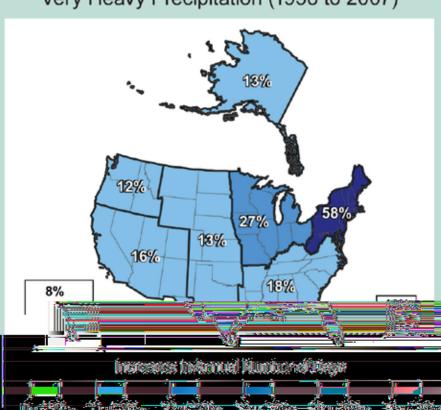
Increasing drought

NOAA is partnering with the water

Decreasing drought

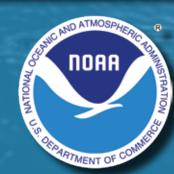
resources sector to translate climate data into accessible, useful, and accurate products.

Increases in the Number of Days with Very Heavy Precipitation (1958 to 2007)



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For example:

- Short-duration rainfall values can be used to properly engineer retention basins to reduce storm water pollutants.
- Drought information can be used to determine when water rationing may be required.
- Temperature and snowpack trends can be used to determine changes in the seasonal timing of runoff.

OAA DATA AND PRODUCTS

There are many different types of useful climate information available.

Examples include:

- The Global Historical Climate Network, which contains world-wide historical temperature and precipitation data.
- The National Integrated Drought Information System, which is a collaborative system that provides information about drought conditions, impacts, and forecasts, as well as planning, education, and research.
- The *United States Snow Climatology*, which includes U.S. daily, monthly, and seasonal snowfall and snow depth.



