


The Value of NCEI Environmental Data

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NCEI: Data Excellence

- From the ocean floor to the surface of the sun
- Trusted, reliable, unique
- Real-world relevance
- Critical to millions of customers
- Continually updated



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NCEI Helps People and Economy

- **Businesses:** Economic Vitality
- **Communities:** Quality of Life
- **Infrastructure:** Security/Resilience
- **Energy:** Production/Conservation/Use
- **Environment:** Agricultural/Biodiversity



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CASE STUDY

Reinsurance Industry

> \$Billion

- **From NCEI:** Global Historical Climatological Network—Daily
- **Uses:** Guy Carpenter, a global reinsurer, uses snow data to understand frequency and severity of snowpack formation in Boston
- **Impact:** Critical to billions of dollars in policy coverage



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CASE STUDY

Insurance Company

\$15B

- **From NCEI:** Next Generation Radar (NEXRAD)
- **Uses:** A Texas insurer used NEXRAD to review an unusually high number of roof claims after hail events
- **Impact:** Hail claims reach \$15 billion annually nationwide




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CASE STUDY

Retail Industry

> \$Billion

- **From NCEI:** State of the Climate Reports
- **Uses:** Footlocker determined warm January temperatures with lowered utility bills allowing reinvestment in infrastructure
- **Impact:** \$120,000 per month in cost savings for reinvestment



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CASE STUDY \$Billion

Retail Industry

- **From NCEI:** State of the Climate Reports
- **Uses:** Conagra ties sales of dry goods to weather and uses trends to inform product sales forecasts and to stock stores
- **Impact:** \$100,000 lost revenue from in 2 regions from warm January




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CASE STUDY \$2.7B

U.S. Corn Growers

- **From NCEI:** Global Historical Climatological Network–Daily
- **Uses:** Farmers use climatological data to determine how much fertilizer to apply in order to minimize waste
- **Impact:** \$2.7B/yr saved in application costs; lessens runoff/water pollution (\$1.7B annual cost avoidance)



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FEATURED PRODUCT >\$1B

Next Generation Radar

- **Impact:** U.S. incidents >\$1B/year
- **Customers:** U.S. aviation industry and National Transportation Safety Board
- **Value:** NEXRAD data assist safety in real time and help analyze incidents for accountability



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CASE STUDY >\$2B

Utility Company

- **From NCEI:** Climatological and historical datasets
- **Uses:** San Diego Gas & Electric combined climate datasets to create a set of criteria that minimize grid weaknesses and litigation
- **Impact:** >\$2 billion in savings for similar events




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CASE STUDY

Energy Company

- **From NCEI:** Daily Temperature Data
- **Uses:** A Colorado utility uses temperature data to determine natural gas demand to maintain adequate winter energy supplies
- **Impact:** Reduction in shortages and over-supply



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CASE STUDY \$Billion

Trucking Firm

- **From NCEI:** Hourly Temperature Data
- **Uses:** Temperature data are used to develop guidelines to control fuel costs concerning truck idling
- **Impact:** Nationwide savings for idling limits are estimated at \$3 billion/year



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FEATURED PRODUCT \$224B

U.S. Drought Monitor

- Impact:** Drought losses total an est. \$224 billion since 1980
- Customers:** Agriculture, livestock managers, municipalities, water resource managers, firefighters
- Value:** Customers across many sectors rely on weekly assessments to gain crucial information for decision-making



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FEATURED PRODUCT >\$B

Global Hurricane Data

- Impact:** Billion-dollar disasters
- Customers:** National Hurricane Center, catastrophe modelers, and reinsurance industry
- Value:** Data are incorporated into catastrophe models to protect life, safety, and welfare of Nation and globe




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FEATURED PRODUCT > Billions

Space Weather Data

- Impact:** Large-scale 150-year event estimated to cost billions
- Customers:** Governments, energy providers, and insurance industry
- Value:** Space conditions are monitored for fluctuations in order to forecast potentially disruptive events across Earth




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FEATURED PRODUCT

World Magnetic Model

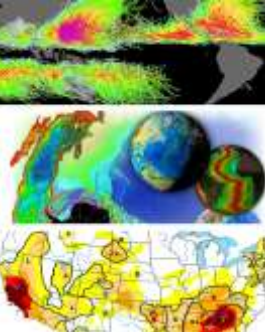
- Impact:** Calculates magnetic field for millions of flights and users of high-tech communications
- Customers:** DOD, NATO, and providers of GPS and wireless services
- Value:** WMM standardizes data that contribute to navigation, altitude, and heading references for many sectors



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NCEI: Beyond the Data

- Promotes growth in climate, coastal, oceans, and geophysical enterprises
- Enables commerce, innovation, expansion
- Reaches far beyond U.S. government



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Our Value: The Bigger Picture

- Everyday, NCEI data add to the quality of life of many people and communities
- From TV weather forecasts to Smartphone apps, data provide a backbone to our lives
- Safety, security, and many modern conveniences are built on data



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The Classical Music of Data

NCEI provides many distinct products no one else in the marketplace does.

We strive to meet the dynamic needs of our customers and the Nation.

