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Defining the Future of Environmental Observation

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Northrop Grumman, headquartered in Los Angeles, California, has the talent and technological resources to help mitigate climate change by providing the environmental information solutions that will help the state and potentially the nation.

A family of Earth-observing satellites built by Northrop Grumman is currently sending critical data on the planet's water cycle and atmosphere to NASA scientists. However, to more accurately forecast the effects of climate change and assist in policy-making decisions, a global earth observation monitoring system of systems is needed. The more accurate the data, the more accurate climate change and forecasting models.

Armed with this information, we can help shape climate change adaptation strategies to overcome these challenges that affect everyone and everything on this planet.

From cyclones and severe storms to volcanic activity and wildfires, improved forecasts made possible through space-based weather and climate observation can have a significant impact on protecting lives, property and the environment.

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Potential impact of climate warming on California's agriculture, water, energy, real estate and public health:

- Wine grapes serve as a bellwether since the grapes are particularly sensitive to climate change. Even a slight change in temperature would have a devastating effect on California's varietal wine regions such as Santa Barbara and Napa Valley.
- Almonds, walnuts, avocados and oranges may sustain substantial declines, mainly due to adverse effect on health and distribution of insects that pollinate plants.
- Most of the state's crops are irrigated by and dependent upon melting snow when rainfall levels are low.
- Predicted reduction in snowpack will affect hydroelectric power generation.
- As increased frequency of heat waves strains electricity grid, rolling blackouts and electricity price hikes become more common.
- Rising sea levels affect coastal power plants and put pressure on the state's levees.
- Wildfires increase in severity and frequency as temperatures rise and rainfall decreases.
- Longer and more severe heat conditions adversely affect people who are more at risk for heat exhaustion, mental fatigue and heat stroke.