

NOAA Marine Science Career - Case Studies

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Ray Tanabe is a Warning Coordination Meteorologist and works for the National Weather Service, under the National Oceanic and Atmospheric Administration (NOAA). Meteorology is the scientific study of the Earth's atmosphere, especially its patterns of weather and climate. Ray is going to share with us more about what a meteorologist does and how you can become a meteorologist too!

What sparked your interest in science and weather?

I grew up on the North Shore of Oahu and practically everything I did as a kid; surfing, fishing, hiking, camping, hunting, diving, etc. depended on the weather. Through my teenage years I really started to understand and appreciate how important weather is to almost everyone. Once, when I was driving from Waialua to Wahiawa I saw a funnel cloud form over the pineapple fields. It did not touch down and didn't do any damage, but it is still one of the coolest things I have ever seen.

My parents both encouraged me to study my passion, meteorology, and once I was in college, Dr. Thomas Schroeder encouraged me to continue through some epic college math class failures. There were many other students who had a difficult time in math and didn't receive their meteorology degree, simply because they gave up. Even though I'm no math wizard, with hard work and his guidance I proved to myself and others that I could get an 'A' in my final college math course. The science of meteorology relies heavily on complex mathematical equations and an excellent understanding of calculus, physics, chemistry and computer science. I attribute much of my success in this career to his help and support. .

What does a meteorologist do?

Many people think a meteorologist is the person who explains the forecast on television. However, television meteorologists make up only a small percentage of career meteorologists. Meteorologists can find employment at universities, private companies, and the government where they are involved with research, teaching, consulting, and forecasting. Most meteorologists in the National Weather Service are 'operational forecasters' who produce weather forecasts 24 hours a day and are constantly on the lookout for severe weather such as tornadoes, flash flooding, high surf, high winds, hurricanes and extreme snowfall. One of the coolest things I've done in my career is save lives by forecasting severe weather. It was a great feeling when I accurately forecast a flash flood and issued a warning ahead of time.



Which severe weather event should kids know more about and prepare for?

Hurricanes are arguably the most destructive weather systems on the planet and the threat is real and it is here today. While tornadoes pack severe winds and have produced a lot of damage and taken a lot of lives, they are relatively short lived and affect limited areas. Hurricanes have the ability to produce severe winds, flooding rains, and destructive storm surges which affect many miles of coastline and last several days to a week. The best way to be prepared is to familiarize yourself with the hurricane risks in your area, have an emergency kit, and have a family emergency plan.

Do you have any more advice?

A physics professor at UH once told our class there should be three things to consider when choosing a career. One, it should be something you like and enjoy. Two, it should be something you are innately good at. Three, it has to be something valued, meaning someone will pay you to do it. The vast majority of folks, he continued, settle for two out of the three. I feel I've been extremely fortunate, meteorology has provided me with all three.