

# NOAA BACKGROUNDER



## Bell 212 Helicopter NOAA's Versatile Utility Platform

NOAA's Bell 212 helicopter is an outstanding platform for scientific observations, remote landing site operations and low-level surveys, and easily accommodates a variety of scientific packages. The helicopter's ability to hover and to land virtually anywhere makes it especially useful to scientists working in remote areas inaccessible by any other means of transportation.



### A WORD ABOUT NOAA...

The National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about the global oceans, atmosphere, space and sun, and applies this knowledge to science and service that touch the lives of all Americans.

NOAA warns of dangerous weather, charts our seas and skies, guides our use and protection of ocean and coastal resources, and conducts research to improve our understanding and stewardship of the environment which sustains us all.

A Commerce Department agency, NOAA provides these services through five major organizations: the National Weather Service, the National Ocean Service, the National Marine Fisheries Service, the National Environmental Satellite, Data and Information Service, and Office of Oceanic and Atmospheric Research; and numerous special program units. In addition, NOAA research and operational activities are supported by the Nation's seventh uniformed service, the NOAA Corps, a commissioned officer corps of men and women who operate NOAA ships and aircraft, and serve in scientific and administrative posts.

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The Bell 212 has been in the NOAA fleet since 1987. It is a medium-sized helicopter that can carry up to 14 passengers. It can be flown with the doors open to allow unobstructed visibility out both sides, and can carry a considerable amount of equipment inside as well as in a sling beneath the aircraft. The Bell 212 has supported many other government agencies in addition to NOAA, including the U.S. Navy, U.S. Fish and Wildlife Service, Minerals Management Service, Alaska Department of Natural Resources, U.S. Army Corps of Engineers, and U.S. Geological Survey. Projects supported by this platform includes:

#### Marine Mammal Abundance Surveys

The Marine Mammal Protection Act of 1972 requires the NOAA National Marine Fisheries Service and the U.S. Fish and Wildlife Service (FWS) to prepare and periodically update marine mammal stock assessment reports.

#### Alaska Polar Bear Surveys

NOAA's helicopters have worked in conjunction with the FWS to conduct annual stock-assessment studies of polar bears north of Alaska. The helicopter is perfect for landing on the ice and allowing scientists to place radio collars on the bears for tracking purposes. The helicopters have also participated in studies of stellar sea lions in the Gulf of Alaska for the National Marine Mammal Laboratory. The helicopter is the only aircraft that can land on rugged remote islands allowing scientists to study the animals close-up.

NOAA's helicopters have also supported the Minerals Management Service in research on the effects of noise from oil drilling and other industrial operations on the spring migration of bowhead whales.

#### Oil Spill Cleanup and Damage Assessment:

When the Exxon Valdez ran aground at Prince William Sound in 1989, NOAA helicopters were called upon to support oil spill cleanup operations and damage assessment. The helicopters have also been involved in assessment of damage due to an oil spill in Tampa Bay.

### **Nautical Charting**

The Bell 212 routinely flies missions in support of the Comprehensive Everglades Restoration Project (CERP). The CERP provides a framework and guide to restore, protect and preserve the water resources of central and southern Florida, including the Everglades. It covers 16 counties over an 18,000 square mile area, located in the vicinity of the Central & Southern Florida (C&SF) Project. The current C&SF Project includes 1,000 miles of canals, 720 miles of levees and several hundred water control structures. The CERP has been described as the world's largest ecosystem restoration effort and includes more than 60 major components. The US Army Corps of Engineers was given the authority to re-evaluate the performance and impacts of the C&SF Project and to recommend improvements and or modifications to the project in order to restore the southern Florida ecosystem and to provide for other water resource needs. NOAA's Bell 212 routinely takes members of the study teams on the Florida Everglades National Park in support of the Army Corps of Engineers and Environmental Protection Agency. The versatility of the Bell 212 makes it an ideal platform for operating in and landing at remote locations in the Everglades. The size of the 212 provides adequate space for personnel and any necessary equipment. The CERP was approved in the Water Resources Development Act of 2000 and will take more than 30 years to complete. The NOAA Bell 212 will continue to be a valuable asset in support of the CERP Program.

### **Nautical Charting**

The Bell 212 helicopter has participated in a multi-year program in conjunction with the U.S. Army Corps of Engineers and NOAA's National Ocean Service to collect detailed data for nautical charts using a laser system and global positioning system to record water depths and shoreline profiles, and to identify hazards to navigation. The system is called SHOALS (Scanning Hydrographic Operational Lidar Survey). The helicopters have surveyed nearly all of the U.S. coastline and much of the coastline of the Great Lakes by recording water depths out to a mile offshore and monitoring annual changes of these coastlines. The U.S. Navy requested a large survey of nearly 400 square miles along the eastern coast of the Yucatan Peninsula, Mexico, to evaluate the SHOALS technology for the development of a similar Navy system. In addition to scheduled surveys, the SHOALS system was called upon to assess the damage to a coral reef in the Florida Keys National Marine Sanctuary after a tanker ran aground on the reef.

### **Hurricane Damage Assessment**

The Bell 212 has also flown post-hurricane damage assessment flights with the SHOALS equipment installed to help local officials determine which boat navigation channels need to be dredged after the storm to make them safe for local boaters. In addition, local governments use this information to upgrade their coastal zone management programs.

### **Atmospheric Studies**

To increase scientific knowledge of how waterspouts and tornados develop and mature, the Bell 212 has been outfitted with a movie camera operated by National Geographic Television to study waterspouts near Key West, Florida. This information is being used by the National Weather Service to assist weather forecasters in determining the projected path of tornados.

### **Sea Ice Studies**

NOAA's helicopters have flown in support of the U.S. Navy, conducting ice research north of Prudhoe Bay, Alaska, to improve sea-ice forecast models. This information is used by the National Weather Service in predicting the break-up of ice in the spring and to aid in marine navigation.

### **Shoreline Mapping**

The Bell 212 has participated in an inter-agency program with the Alaska Department of Natural Resources, the Minerals Management Service of the Department of the Interior, as well as NOAA's National Ocean Service, to collect shoreline data to map the location of the federal/state leasing limits off the Alaska coast. The purpose of this program was to conduct lease offerings under the Outer Continental Shelf Lands Act and the Submerged Lands Act.

### **Seismographic Studies**

NOAA's helicopters have flown in support of the U.S. Geological Survey to repair seismographic equipment used to monitor earthquake activity on remote islands of Alaska.

### **NOAA's Aircraft Operations Center**

The Bell 212 is maintained and operated by NOAA's Aircraft Operations Center located at MacDill Air Force Base in Tampa, Fla. The AOC, part of the NOAA Marine and Aviation Operations, is charged with the management of NOAA aircraft, personnel, budget and facilities in support of the assigned fixed-wing and rotary-wing aircraft. Commissioned officers of the NOAA Corps, the nation's smallest uniformed service, fly and navigate NOAA hurricane and research aircraft, and a staff of dedicated NOAA civilian employees support the Center through administrative, engineering and maintenance functions.

For further information, please contact Lori Bast, NOAA Aircraft Operations Center Public Affairs, at (813) 828-3310, ext. 3072, or visit our web site at [www.aoc.noaa.gov](http://www.aoc.noaa.gov).

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