

U.S. Antarctic Program

Research Support

Support for Antarctic research includes all necessary infrastructure, instrumentation, and logistics for scientists from all disciplines performing research in Antarctica. This support includes:

- Forward **staging facilities in New Zealand and South America**, as well as the homeports or headquarters of the military and civilian contractors in the United States. The NSF Prime Contractor, currently Raytheon Polar Services has USAP support facilities in Denver, CO, Oxnard, CA, Christchurch, New Zealand, and Punta Arenas, Chile. The military operates Joint Task Force Antarctica from the Pacific Command headquarters at Hickam Air Force Base, Hawaii.
- **McMurdo Station** on Ross Island functions as the logistics and science support hub of the USAP. Research on glaciology, geology, geochemistry, geophysics, biological studies, and long-term ecological research is conducted in and around McMurdo. During the austral summer McMurdo is the gateway to the interior of the continent, including Amundsen-Scott South Pole Station and deep field research camps.
- **Amundsen-Scott South Pole Station** supports research focused on understanding earth systems and on the origin and evolution of the universe. Disciplinary studies include meteorology, astrophysics, aeronomy, atmospheric chemistry, astronomy, and seismology.
- **Palmer Station** on Anvers Island is primarily a marine biology laboratory and is one of NSF's Long-Term Ecological Research sites, focusing on biological and marine ecosystem research.
- **DoD fixed-wing aircraft** provide transportation and resupply of people and cargo to and from the continent, to resupply South Pole Station, to support major deep field camps and for search and rescue operations. The 62nd Airlift Wing of the United States Air Force from Joint Base Lewis-McChord, WA flies C-17 aircraft between Christchurch, New Zealand and McMurdo Station. The 109th Airlift Wing of the New York Air National Guard from Scotia, NY operates ski-equipped LC-130 aircraft which fly from McMurdo Station to South Pole and other inland locations.
- **Rotary- and fixed-wing aircraft** contracted from private companies support small remote field camps. Kenn Borek Air, Ltd. of Calgary, Canada operates a fleet of DHC-6 twin otter and Basler-Turbo DC-3 aircraft in support of deep field operations. Helicopter support is provided by Petroleum Helicopters Inc. of Lafayette, LA.
- Two **leased research vessels** – the *R/V Nathaniel B. Palmer*, a research icebreaker designed to operate year-round throughout the Antarctic Ocean, and the *R/V Laurence M. Gould*, which supports research in the Antarctic Peninsula area and provides logistics support to Palmer Station.
- **Leased icebreakers** for opening the channel to McMurdo Station for the single annual fuel tanker and supply ship that are provided on a cost reimbursable basis by the Military Sealift Command.
- Two **Military Sealift Command vessels** for annual replenishment of fuel and materials.
- Several other DoD organizations provide **engineering and operations support** (Space and Naval Warfare Systems Center, Charleston provides Air Traffic Control and Meteorology; Army Cold

Regions Research and Engineering Laboratory for snow and ice engineering and mobility consultation and studies; and Pacific Division of the Naval Facilities Command for architectural and engineering assistance and oversight).