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YOUR STAY AT McMURDO STATION ANTARCTICA

1975 - 1976



NATIONAL SCIENCE FOUNDATION
OFFICE OF POLAR PROGRAMS
U. S. ANTARCTIC RESEARCH PROGRAM

YOUR STAY AT M^{c}MURDO STATION ANTARCTICA

1975-1976

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FOREWORD

This booklet is to assist you in your stay at McMurdo Station, Antarctica. It briefly covers facilities, procedures, services, and safety hints that will be of help to you while on the ice. No booklet can attempt to cover all that you need to know in the changing environment of Antarctica.

UPON ARRIVAL AT McMURDO, YOU WILL ATTEND A SHORT BRIEFING ON THE CURRENT SITUATION.

YOUR STAY AT McMURDO

McMurdo Station is Antarctica's first city. Founded in 1956, it has grown from an outpost of a few buildings to a complex logistics staging facility of more than 100 structures. Year-round population is approximately 50 persons with the summer "tourist" population jumping to nearly 800. "Old hands" will find that McMurdo has changed considerably in recent years, and can expect increasing numbers of women scientists, journalists, and official visitors; greatly expanded international activity with flights by several Antarctic Treaty signatories; and commercial ventures, notably tourism, in which groups of adventurers are brought to former frontier outposts. McMurdo can proudly boast of the only large-production saltwater distillation plant in Antarctica. Greater McMurdo includes a "downtown" area, science and support facilities, and an outlying airport (Williams Field). From Williams Field, flights not only span the continent but maintain McMurdo's contact with the outside world. Two miles away is the neighboring New Zealand research facility of Scott Base.

All cities have hustle, bustle, confusion, and alienation; however, they also serve as intellectual hubs, as melting pots where people of different backgrounds meet, and as centers of international exchange. These are all true of McMurdo.

This booklet attempts to cover questions most frequently asked by participants in the U. S. Antarctic Research Program (USARP) when they arrive at McMurdo. As stated on the Foreword, no booklet can cover all possibilities. In line with this, you will attend a short briefing upon your arrival that will cover basic procedures and fluctuating conditions. In reading this booklet, please make a notation of any area about which you might have a question and bring it up during your briefing.

Wherever general information is provided, there will likely be additional detailed information on the bulletin boards in the USARP Quarters. For example, the hours of service at the liquor sales and the Ship's Store or exchange will be posted. Whenever you require additional information, please consult the listing on pages 14 and 15 of this booklet for the appropriate person to see.

It is hoped that your stay at McMurdo will be not only pleasant but above all productive.

THE USARP CHALET

The Chalet was erected during the 1969-70 austral summer. It is the USARP administration and operations center and houses the offices of the National Science Foundation (NSF) Representative and the support contractor, Holmes & Narver, Inc. (H&N). The Chalet has a conference facility and a meeting room where presentations and official social gatherings are held. A single-side-band radio for contact with field parties is also located in the Chalet.

USARP SCIENCE FACILITIES

Science facilities are divided among three broad areas of research: atmospheric sciences, earth and glaciological sciences, and biological sciences.

The atmospheric science buildings are situated in noise and electrical interference-free areas. They include the cosmic ray intensity variations laboratory (Cosray) on the road to Scott Base, operated by the Bartol Research Foundation and the geodetic satellite tracking facility (Sat Track) operated by the University of Texas. The library for atmospheric sciences is divided among these facilities.

Glaciologists, topographic engineers, geologists, and soil scientists use the Thiel Earth Sciences Laboratory situated on a shoulder of Observation Hill. The lab contains office space, a small library and conference room, two diamond saws, petrographic and binocular microscopes, a rock crusher, a polishing wheel, and other lab equipment. It is used primarily in summer when field parties fly back and forth between McMurdo and the outlying field areas. It also houses the Dry Valley Drilling Project (DVDP) office.

Biological sciences are centered in the Eklund Biological Center (EBC). Facilities include over 6,000 square feet of laboratory space, including a wet lab with aquaria facilities, office space, a dark room, a library, a work space and a packing area at the rear of the building. Mobile fish houses are provided for the collection of marine organisms and are used during the early austral summer on the sea ice of McMurdo Sound.

USARP SUPPORT FACILITIES

Support facilities include a garage, a field party processing center, and a storage center.

The garage is for servicing and preventive maintenance of motor toboggans used by field parties; power wagons which are used by scientists working in the local McMurdo area; and Trackmasters and Nodwells which are intended for use on the inland traverses and on the sea ice. Salt from sea ice and the volcanic rocks of Hut Point Peninsula are particularly hard on tracked vehicles so their use locally is restricted to early summer. The garage also has grinders, welding equipment, air compressors, etc., all of which are available to scientists. Those requiring their use should check with the Administrative Assistant in the USARP Chalet and coordinate their needs with the Senior Station Engineer.

The Berg Field Center (BFC) issues food and equipment to field parties, and is the location where your equipment is gathered prior to deployment to the field. It also houses a diving locker for the maintenance of scuba equipment.

A storage building (Building 73), located adjacent to the BFC, is used primarily by the H&N support staff; however, specific science items may be stored in it. Arrange with the BFC Manager for use of this space. In addition, the storage building is the focal point of all cargo operations, including retrograde.

LODGING

Berthing facilities in McMurdo are limited in quantity and quality. Those who live and work permanently in McMurdo usually are housed in Building 166, "the Hotel." Those who are staying in McMurdo only for a short time, or are moving frequently between the field and McMurdo, may be housed in Buildings 110, 111, and 112. Some principal investigators, certain program guests, and some senior administrative personnel will be housed in Building 137. Buildings 125, J162 and J203 will be used to house the majority of the contractor support staff.

In late October/early November and in late January/early February, the quarters area will be crowded. Your patience

is requested. Also please have consideration for your neighbors. Remember that some programs operate 24 hours a day and people will be sleeping during the day in various quarters. Quiet is to be maintained in berthing areas at all times.

The lounge in Building 166 is for everyone. Consideration is important here also. The housework in maintaining common-use areas is not overly strenuous but can be time wasted from other activities when the cleaning required becomes excessive. Please do your part to keep such areas clean. H&N support personnel will perform maintenance in common-use areas; however, you are expected to keep your own berthing area clean and your bunks made up.

EMERGENCIES

The danger of fire is always present and is always great. Be careful about smoking. Don't smoke in bed! Check the ashtrays and waste baskets before leaving common-use areas for the night. Most buildings are equipped with an automatic fire alarm system, but in the event of FIRE call 333 and then wait for the fire-fighting party and direct them to the blaze.

Even with the best safety precautions, injuries do happen. If someone is injured and requires immediate transportation to the Dispensary, the number for the ambulance is 222. Please wait for the ambulance and direct it to the location of the injured person.

If you discover the heat off in a building, a water faucet that will not turn off, a leak in a water or sewer line, or any maintenance problem that will result in damage to a building or that would cause a safety hazard, call the Public Works Trouble Desk at 444.

FOOD AND DRINK

The Galley, opened in January 1969 and operated by the U. S. Navy, is situated in the large beige personnel building (Building 155). USARPs are welcome to eat in either the enlisted or Officer section of the Galley. The Navy operates four clubs at McMurdo Station where liquor, beer, and soft

drinks may be purchased for consumption in the club. Civilian personnel are welcome to patronize all clubs. In order to maintain effective management and equal patronization of all the facilities, it may be necessary to limit the use of certain clubs to designated civilian personnel. (If this is required, such a restriction will be based on established Navy policy.) There is also a package store located in Building 155 where liquor and wine may be purchased by the bottle. Personnel desiring to make purchases at the package store must, at the time of initial purchase, obtain a liquor ration card from the package store attendant. The ration card must be presented for all subsequent purchases. Beer and soft drinks are sold by the case in Building 121. Operating hours will be promulgated through the Plan of the Day.

GENERAL SERVICES

The U. S. Naval Support Force, Antarctica (NSFA) provides the basic logistics support to enable USARP to perform its specialized activities.

You will be arriving at McMurdo during the busy austral summer. The daily action is outlined in the PLAN OF THE DAY published by NSFA and in the FLIGHT SCHEDULE of the Antarctic Development Squadron Six (VXE-6). These are posted daily in the Eklund Biological Center, Thiel Earth Sciences Laboratory, the Berg Field Center, living quarters, and the Chalet. The Plan of the Day gives information about special events, opening and closing of temporary roads on the sea ice, water supply changes, health and safety hints, and movie schedules. Make a habit of reading these two schedules daily.

1. Ship's Store - Items here include toiletries, stationary, radios, watches, tobacco, confectionary, cameras, and film. Note, though, that at winter's end stocks are depleted and often no film, for example, is available until the resupply arrives by ship in January.

2. Post Office - It takes three to four hours to sort the mail from incoming flights. After it has been sorted, the Chalet will be notified and H&N personnel will sort it into alphabetized boxes in the lounge of Building 166. This

ensures that mail for station personnel is available immediately. For field parties, mail will be delivered via normal resupply flights.

3. Medical Dispensary and Hospital - Dispensary-medical care is available year-round; sick call hours are posted and emergencies will be seen anytime. A dentist is available during the summer for dental emergencies.

4. Barber Service - This service is free and performed on an appointment basis to avoid wasting time. For an appointment just sign the schedule posted on the barber shop door. Tipping is not allowed.

5. Church - The Chaplain is always available for consultations. Various denominational services are held in accordance with schedules published in the Plan of the Day.

6. Laundry Service - Washing machines and dryers are available in Buildings 110, 111, 112, 115, 137, and 166. However, in times of water shortage (see Water) they will be placed out of service. USARP day at the U. S. Navy laundry (Building 155) will be posted on your quarters' bulletin board. Laundry should be there before 0900. It can be picked up one to three days later. Laundry bags and identification pins are available from the BFC Manager. Wool and other shrinkable materials or those with dyes that run should be hand-washed. Procedures for the weekly exchange of bed linen will be posted on appropriate bulletin boards.

7. Recreation - The Recreation Hall (Building 63) has a recording center (for transferring music on tapes), ping-pong, billiards, and weight lifting apparatus. The bowling alley is open only during the winter. The Navy library in Building 155 contains a collection of polar books, some technical books, and a great number of pocket books. The Chaplain has the key to the polar books cabinet. The Special Services office in the upstairs part of the Recreation Hall contains a variety of musical instruments and music tapes for copying, and occasionally ice skates. These can be drawn on short-term loan. A movie is shown nightly at various locations in McMurdo. Also at certain times, the USARP-sponsored "Understanding Science" lectures are held at the Chalet. A small gymnasium is located in Building 75.

WATER

Seawater is distilled at the rate of about 30,000 gallons a day. This is barely enough to handle peak summer requirements if water conservation is practiced. Many problems have always been existent in trying to pipe fresh water to McMurdo in freezing temperatures. On several occasions the heat tape systems have failed and the water pipes have ruptured from freezing. When the pipeline system is inoperative, water is hauled to various parts of the station by tank truck. This means that water cannot be provided to refill all tanks daily and shortages result. Therefore, a strict water discipline must be practiced by all, especially during the summer. As stated previously, during water shortages washing machines will be placed out of service. During times of normal operation, wash your clothing only once a week. Also during time of normal operation, showers may be taken no more than once a week and consist of a short wetting, followed by soaping and scrubbing without water, and then a quick rinse. The water faucets must never be left running while washing hands and brushing teeth. You will be expected to practice water conservation continuously.

AIRCRAFT OPERATIONS

Hercules (LC-130) and Starlifter (C-141) aircraft both are used in airlift operations. They fly between Christchurch and McMurdo carrying passengers and cargo. The Hercules aircraft, which are ski-equipped, can land on the ice runway or prepared skiway in the open field. They use Williams Field for flights to Siple, South Pole, Vostok, and field camps. Regular station resupply flights, carrying fuel, cargo, and passengers as required, are flown daily or more frequently on a turn-around basis. The aircraft remain at the inland stations for the minimum time necessary to unload fuel (usually 20 minutes) and cargo (variable). The C-141 is a wheeled aircraft and lands only on the annual sea ice runway during October, November, and December.

The flight plan is published daily by VXE-6 "the world's most experienced antarctic airlines," and is posted in the late afternoon in USARP buildings. It includes helicopter and LC-130 flights to and from McMurdo on the following day.

If you are involved with the helicopter operations you will receive a booklet "Helicopter Facts for Scientists and Crews," which contains information of special importance to these operations. The Administrative Assistant will issue these.

All flights for USARP personnel and cargo are coordinated through the H&N Representative or the NSF Representative. If you need air support, make your needs known to the Administrative Assistant, who will place your request on the agenda for the next Air Operations meeting. The H&N Representative or the NSF Representative will use this agenda for coordinating air support with VXE-6. Do not arrange air support directly with VXE-6.

Because of the nature of antarctic operations, flights are subject to various delays such as weather. Since weather conditions are so critical, decisions to fly are often given on a very short notice and flight times can be advanced or delayed several hours. The sure way to know what is happening to your flight is to stay in touch with the Chalet. Passengers for LC-130 and C-141 flights should be at the Williams Field "Strip Cargo" terminal for preflight processing at least one hour before scheduled departure time.

When you originally arrive in McMurdo, the Administrative Assistant will ask for the dates that you wish to redeploy to Christchurch, New Zealand, and to the United States. Please keep him informed of any changes so that you may be scheduled to depart when you desire.

During the austral summer, bus service is available from Williams Field to McMurdo every two hours. Unless there is a special personnel load to or from Williams Field, USARP transportation will not be used and you should plan to use the bus service provided. At times weather conditions do not permit travel between McMurdo and Williams Field. A cafeteria is available at the Field.

CARGO

The Materiel Coordinator is the person responsible for handling all USARP cargo. He is the principal contact with the Naval cargo system. If you have questions about the arrival or shipping of your cargo, please contact him. His

office is located in the ground floor of the Berg Field Center. You are responsible for packaging your own cargo if it has not been prepackaged prior to arrival in McMurdo.

The Materiel Coordinator must know all of your cargo needs and requirements at least one day or more before your flight. He will need to know the weight, cube, and destination. In the case of large or bulky items, he can assist you in calculating the weight and cube. These three items are necessary for preparation of the Transportation Control and Movement Document (TCMD) which must be used to maintain control over the tons of cargo shipped in Antarctica. Undocumented cargo entrusted to a friend, crewman, or an anonymous person is the cargo that most frequently goes astray and cannot be traced. On occasion, fuel resupply flights are diverted from their planned destinations because of poor weather conditions and are sent to refuel other stations. All cargo on board would naturally go with it. If your cargo is undocumented, it may be lost.

VEHICLE USE

Scientific programs requiring vehicle usage should contact the Administrative Assistant in the Chalet. Since there are heavy demands, especially at certain times of the day, vehicle usage will be limited to working operations on a checkout basis.

Trips to Scott Base, sightseeing excursions, social visits, etc., are to be undertaken on foot. All civilian personnel who will leave the confines of downtown McMurdo on foot must log their departure and return at the Chalet. In addition, when you must leave McMurdo in a vehicle, log your departure and return by radio with McMurdo (MAC) Center.

There are heavy and priority demands for power wagons whenever aircraft arrive from Christchurch, often between the hours of 1300 and 1500 hours during the day. In addition, helicopter scheduling requires vehicle support between 0630 and 0800 hours and again at 1200 and 1300 hours daily. During these periods, power wagons may not be available for trips to outlying science facilities.

The H&N Senior Station Engineer will check you out on how to use the vehicles. Make it a practice to check the fuel,

tires, antifreeze, and the engine oil level, especially before a long trip. These items are available at the garage. Gasoline is available near the Public Works Building. Always fill the fuel tank after vehicle use. In this climate condensation forms inside a partly empty tank and can enter into and freeze the fuel line. Be sure to warm the engine before use. If your program is unusual and requires vehicle operation in severe weather or if you are spending prolonged periods on the ice shelf with a vehicle, be sure to see the H&N Senior Station Engineer for special instructions.

Please report any defects, however slight, to the Chalet when returning the vehicle. Maintenance at an early stage keeps the vehicles from undergoing costly, time-consuming, and major repairs.

A speed limit of 10 MPH prevails in the narrow streets of downtown McMurdo, and a limit of 20 MPH prevails on the McMurdo-Williams Field Expressway. As in any driving, road conditions vary; gear down where needed, and operate in four-wheel drive only when necessary. In the vicinity of the Helo Pad all operators must be familiar with instructions on safe distances between vehicles and helicopters.

SHIPS

Two icebreakers, a T-5 mission class tanker, and a cargo ship will arrive at McMurdo this season. They are expected in January and February. For field parties utilizing ships for transportation, food and equipment must be taken to the ship at least a day before sailing. All passengers utilizing ship transport should be prepared to board ship anytime up to 24 hours before scheduled sailing time, since rapidly changing weather and ice conditions influence ship schedules.

SOME SPECIAL NAVY SERVICES

1. Terminal Operations - This office handles all Antarctic cargo. Your contact with it, as stated previously, is through the Materiel Coordinator.

2. Supply Office - The Navy Supply Officer supplies fuel and common use items used by the various organizations at McMurdo. Your contact for obtaining these items is the BFC Manager.

3. Maintenance - Maintenance of the base and related services are provided by the Navy's Public Works Department. The USARP office is your contact with this system. It includes work on and maintenance of buildings, plumbing, heating systems, telephones, light and diesel power systems, garbage collection, transportation systems, and carpentry work. Requests for services are submitted only through the H&N Representative or the NSF Representative. Do not arrange for these services yourself.

4. Communications - Communications for all antarctic stations and contact with Christchurch is maintained by the Navy on a 24-hour basis. Field party communications are also under continuous surveillance. If after 72 hours no contact is made with a field party, Search and Rescue procedures are followed and an aircraft is sent out to locate you. It is required that daily contact be attempted.

All requests for radio communication with Christchurch, New Zealand, inland stations, field parties, and ships or planes must be cleared by the NSF Representative.

An amateur radio facility (Ham Shack) is also operated by the U. S. Navy for the use of all. When atmospheric conditions permit, the Ham Shack can offer the opportunity to make a "phone patch" to talk to family and friends at home in the United States. Procedures for use of this service will be posted on appropriate bulletin boards. See the Administrative Assistant if you have any questions.

If you wish to send an official radio-teletype message to your academic institution or to others involved in your research program, you are asked to deliver a reasonably legible text of your message to the Administrative Assistant. He will have it typed and approved before delivery to the Naval Communications Center. All USARP message traffic from Antarctica must be approved by the NSF Representative, or, in his absence, the H&N Representative. Incoming messages will be received by the Administrative Assistant and distributed to you.

FUELS

Conservation of fuels is of primary importance. Scarcity of this product and increased costs have a major impact on

the operational program. Your continuing compliance with published antarctic energy conservation measures will be appreciated. Keep room and building temperatures at a comfortable level (65° or lower) and turn off all unnecessary lights.

COMMUNITY PARTICIPATION

McMurdo station is a unique complex comprised of temporary inhabitants whose backgrounds are diversified but whose mission has one single purpose; the continuation and advancement of scientific research. As in any community, there is a distinct social structure that develops as a result of individual interests, goals, and associations. In order for the entire community to fully appreciate and understand the ultimate single purpose of its mission in Antarctica, an open exchange of ideas and explanation of individual projects is highly encouraged. One means provided for this exchange is through informal talks and presentations by program participants. To enhance a better understanding of the U. S. Antarctic Research Program objectives, all personnel in McMurdo are invited to attend these presentations. Volunteers from the science community are encouraged to make presentations. Presentations may be scheduled with the NSF Representative. Slide and movie projectors are available for presenting illustrated talks.

KEY NSF AND H&N PERSONNEL

NSF Representative, Antarctica	Dave Bresnahan Chris Shepherd Jerry Huffman
H&N Representative	Emmett Herbst Erv Koenig
Construction Superintendent	Curtis Hull
Administrative Assistant	Dan Morton
Materiel Coordinator	Pat Haggerty
Berg Field Center Manager	Mike Reiff
Berg Field Center Assistant Manager	Darvel Lloyd
Eklund Biological Center Manager	Mike Havelka
Senior Station Engineer	Frank Castello

LISTING OF SPECIFIC AREAS OF SUPPORT AND OF THOSE RESPONSIBLE FOR PROVIDING ASSISTANCE

For:	See:
Aircraft Scheduling	Administrative Assistant, H&N Representative, NSF Representative
Field Party Alcoholic Beverage Usage	Administrative Assistant, H&N Representative, NSF Representative
Berthing	Administrative Assistant
Building Maintenance	Administrative Assistant
Cargo (Receiving and Retrograde)	Materiel Coordinator
Communications	
Radio Teletype Messages	
Preparation	Administrative Assistant
Approval	H&N Representative, NSF Representative
Single-Side-Band	H&N Representative, NSF Representative
Construction	H&N Representative, Construction Superintendent
Diving Locker	BFC Manager
Mechanical Equipment Usage	Administrative Assistant, H&N Representative
Field Party Support	BFC Manager
Navy Supply	BFC Manager
Passenger Manifesting	Administrative Assistant
Radioactive Materials (Registering and Handling Procedures)	EBC Manager

For:	See:
Storage (limited)	BFC Manager
Vehicles	
Maintenance	Senior Station Engineer
Usage (Science Support)	Administrative Assistant

For any area not covered, the Administrative Assistant will provide help in contacting the appropriate support unit.

McMURDO STATION

1 Enlisted Men's Club
2 Post Office
15 CPO Club
36 Chapel of the Snows
52 Acey-Deucy Club
56 Ekland Biological Center
58 USARP Garage
61 Disbursing Office, Hill Cargo
63 Recreation Building
73 USARP Warehouse
75 Gym
76 Officers' Wardroom
105 Photo Lab
110 USARP Quarters
111 USARP Quarters
112 USARP Quarters
121 Naval Supply
125 USARP Quarters
137 USARP Quarters
138 USARP Earth Science Lab
139 Earth Science Refr. Units
140 GSK
141 Tool Shed
142 Dispensary & Hospital
155 Galley, Barber Shop, Ship's Store
Library, Liquor Store & Laundry
160 Bery Field Center
161 Construction Office
165 Navy Admin. Bldg.
166 USARP Quarters
167 USARP Admin. Bldg. (Chalet)
177 Cargo Shack
182 Fire Station & Telephone Exchange
J20 USARP Satellite Tracking Lab
J62 Construction Barracks

