

McMurdo Area User Committee
(MAUC)

Annual Meeting
16 July 2007

Raytheon Polar Services Company
Centennial, Colorado

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Recommendations

Staging Space

Lack of appropriate staging space remains an area of top concern for MAUC. A study group was formed last year on MAUC's recommendations and communicated findings to RPS. Jim Scott communicated to the committee that he thought some of the most promising areas for space were in buildings 183, 157, or 159. John (Woody) Haywood suggested an immediate solution for staging space during select periods of the upcoming season could be found by utilizing a Jamesway on the ice runway.

Recommendation #1

Additional staging space should be made available to grantees through a combination of: a) immediate solutions (e.g. the ice runway jamesway, b) intermediate solutions (e.g. through reallocating space in buildings 183, 157 or 159) and c) through long range planning (e.g. by providing dedicated staging space in the design of new buildings such as Science Support Center Phase II). MAUC recommends that Jim Scott continue to work with staging space committee (Tom Neumann and Sridhar Anandakrishnan) to identify possible medium- and long-term solutions.

Wireless in Building 155

MAUC was pleased with the response to last year's recommendation to add wireless to dorms where grantees reside. The wireless in buildings 208 and 209, in addition to that in 203, should help reduce space issues in CSEC. However, many grantees are also housed in Building 155 and they are left out of the current wireless configuration. In addition, the dining facility is an ideal place to have group meetings or find quiet office space outside of meal hours. We understand that kitchen staff need to have the dining area clear of people during times immediately before and after meals (or perhaps just after?), but is there a reason hours could not be posted where the galley is available for grantees to set up a notebook and get some work done?

Recommendation #2

Wireless in building 155 should be revisited. At the very least having grantee access to wireless in the 155 lounge and dining facility would provide ideal places for grantees to meet and work and relieve congestion in CSEC.

USGS Mirror Site in McMurdo

A recommendation from last year's MAUC meeting is still largely not addressed. That is to have a mirror site of the USGS Atlas reside in McMurdo. We understand one of the problems is in communicating with the appropriate people at USGS

Recommendation #3

A mirror site of the USGS Alas site should be maintained at the Crary Lab

Impact of "Just in Time" on science

MAUC was briefed about the proposed new operational strategy in McMurdo to operate in much the same way large companies like Boeing and Ford operate, by having minimal supplies on the continent, and instead have them delivered when needed (e.g. "just in time"). Although MAUC is sympathetic to the need to streamline and save money, MAUC is very worried about the impact of this new strategy on Science. One of the reasons that the U.S.

generates cutting edge science is because of the flexibility the logistics hub of McMurdo provides. Carrying out science in the inhospitable environment of the Antarctic generates unexpected needs to improvise in order to get the job done. We are very worried that by reducing the inventory on the Ice, the ability to quickly adapt to unexpected challenges will be lost, and so will our scientific edge.

Recommendation #4

The economic benefits of the “Just in Time” operational strategy should be carefully weighed against its impact on the adaptability of science. Through annual meetings, MAUC should be kept apprised of how this strategy may impact science on the continent

Changes to the “Meet and Greet” in Christchurch

MAUC was informed of plans to eliminate the meeting of participants in Christchurch and instead provide hotel and clothing issue instructions prior to participants leaving CONUS. MAUC agrees that this is an appropriate way to scale back operations and should for the most part work fine. One concern though is that there is no way to communicate any change in plans to grantees from the time they leave their homes to the time they arrive at their hotel in CHC. Such a change may include the need to have gone to the CDC before going to the hotel, or a hotel change.

Community views collected by Stacy Kim after the MAUC meeting: Nearly all science parties require the CDC truck to transport their equipment from the Christchurch airport. This should be standard procedure, rather than requiring special requests.

Recommendation #5

A method of getting messages to participants arriving at the Christchurch airport should be established so that any critical changes (hotel reassignment, clothing issue changes, etc.) can be communicated to the participant as soon as they arrive and before they leave the airport area. Suggestions for doing this include a bulletin board in a locked glass case or computer screen in place of the RPS booth that is currently at the airport.

Radioisotopes in CSEC

Over many years of radioisotope use in CSEC as a metabolic tracer, it is inevitable that contamination has occurred. This contamination is not at levels that can be detected by scintillation counters, and not at levels to be of any health concern. It is, however, at levels that have provided a situation of “incompatible science”. Grantees who analyze small samples for natural radiocarbon abundance as a geochronometer have found exceptionally high levels of ^{14}C in samples which have rendered them useless for the purpose they were collected. This was previously not a serious issue, but advances in Accelerator Mass Spectrometry (AMS) allow for very small samples to be analyzed and exceedingly small amounts of radiocarbon (and hence contamination) to be detected.

Recommendation #6

MAUC recommends a four-phased approach to reduce the impact of the radiocarbon contamination in the Crary Lab:

- a) Phase II labs should be thoroughly cleaned in a way that reduces radioisotope contamination. Testing areas of the lab for low-level contamination should be considered (i.e. using AMS techniques)
- b) A general isolation policy should be adopted whereby any grantees who have access to the Radiation Lab should not be assigned space in Phase II, and grantees who use ^{14}C as a geochronometer should not be assigned space in Phase I.

- c) Equipment used by grantees who have access to the rad lab should be tracked and identified (e.g. with a permanent red label) so that grantees concerned about potential contamination can be confident in equipment cleanliness
 - d) Samples of grantees who use the Radiation Lab should not be stored in Phase II freezers.
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The contractor's role in proposal reviews

The science community has expressed concern that the role of RPS in making decisions on proposal funding was not clear, and feedback on ORW's not given. MAUC was informed of the role of RPS in the proposal review process.

Recommendation #7

As well as the mail-in reviews and panel summaries provided to proposal writers, a summary of the review carried out by RPS, as well as any role it may have played in the funding decision should also be provided so that proposal writers can make the necessary adjustments to future proposals

SuperDARN and EMI issues

MAUC was informed of the Super Dual Auroral Network (SuperDARN) site to be established in the McMurdo area.

Recommendation #8

MAUC should be kept informed of developments with regards to SuperDARN and MAUC member Steve Barwick has volunteered to act as a conduit between NSF and the science community to ensure that EMI issues are thoroughly addressed.

Community views collected by Stacy Kim after the MAUC meeting on other topics:

- *Moving functions to Christchurch.* Moving some local functions out of McMurdo will have a negative impact on science and productivity. Though it may reduce maintenance costs for McMurdo Station, it will increase the costs of housing scientists for extra time. The field season is very limited now, and continues to be nibbled away at by later mainbody dates, increased training requirements that take precious ice time, and winter understaffing which leaves many departments unable to start work at the beginning of mainbody. If grantees must wait an extra few (or several) days for repairs sent to Christchurch, we will be further challenged to complete our research during a season.
- *Handcarry from Christchurch to McMurdo.* Notebook PCs are essential scientific equipment that cannot be placed in hold baggage, and carry on restrictions need to recognize this.
- *Supported Operating Systems.* Many scientific instruments and software run on open source Linux code, especially cutting edge applications. Maintaining the ability to use these programs is critical to utilizing state-of-the-art equipment.
- *Medical department.* The PQ process needs revamping, as it is out-of-date on most medical and dental standards. In addition, the level of care available at McMurdo, and the degree of connectivity between McMurdo and Christchurch, were very different when the requirements were established.
- *Dry Valleys ASMA rewrite.* At New Harbor, established tent sites have not been outlined on the maps. Including them in the revised plan will minimize requirements for establishing more permanent buildings. The New Harbor

moat should be excluded from wording that applies to closed systems (Dry Valley lakes) as it flushes every summer.

- *Snowmobile helmets.* There was concern about increased incidence of frostbite if helmets are required. The only ones that are worth even considering are the full integral helmets that include a chin guard that is part of the helmet.
- *Pea flags.* As McMurdo wastewater is not treated for pharmaceuticals and POPs, nor is it retrograded to the US, concern with these contaminants at deep field sites seems misplaced until the much larger point source at McMurdo is cleaner.
- *Crary darkroom.* An equipment room would be very useful in Crary, and the darkroom could be reallocated to this use.
- *Equipment requests.*
 - 1) Table Top Scanning Electron Microscope. Suggestion: Hitachi TM-1000 (http://www.hitachi-hitec.com/global/em/tab/tab_index.html http://www.hitachi-hitec.com/global/em/tab/tab_index.html). Cost is \$58,000, and it must be unpacked and operated in the US with technicians and scientists partaking in the installation and operation. It could then be repacked for transport to McMurdo.
 - 2) Microscope and camera systems, especially stereo zooms with cameras. Suggestions: SMZ1500 with MC5 camera, Nikon software and dedicated computer; and for easy field use at low magnification, the ProScope (<http://www.proscopehr.com/>) with dedicated laptop.

POLAR ICE Commendation

It is of note that Polar Ice has not been an issue in recent MAUC meetings. MAUC polled the science community following the meeting and found that overwhelmingly the community is quite happy with the state of Polar Ice. MAUC would like to take this opportunity to praise all those responsible for developing PolarIce over the years. It is clear that this was a daunting task, but the development group was always open to community input and used that input to bring PolarIce to the high level of functionality that it is at today. As one grantee put it when asked for feedback... "I heart PolarICE"

Agenda

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| 8:00 – 8:30 | Welcome and Introductions (continental breakfast) | Patricia Jackson |
| 8:30 – 9:00 | Last year's recommendations and NSF responses <ul style="list-style-type: none">• A more permanent solution for staging space in McMurdo, Tom Neumann's survey• Relieve the Crary lab space squeeze by wireless connectivity for grantees• USGS Antarctic Atlas mirror site in McMurdo• Sample handling• Safety training waivers for training received at grantee institutions• Online instruction for grantees | Peter Doran, Steve Kottmeier,
Subject matter experts |
| 9:00 – 9:15 | BREAK | |
| 9:15 – 9:30 | Change and Optimization | Sam Feola |
| 9:30 – 10:15 | Environmental topics <ul style="list-style-type: none">• Dry Valley ASMA Management Plan review (07-08 field season)• Prevention of non-native species introduction in Antarctica (to include discussion on cross-contamination protocols)• Human waste disposition from field camps (sea ice and non-Dry Valley field camps) | Nate Biletnikoff, Polly Penhale |
| 10:15 - 11:15 | Changes for the coming season <ul style="list-style-type: none">• Extended season plans and preparations• Field Support (FSTP, BFC, helo, fixed-wing, science construction)• IT security/ grantee computers/ NSF waivers• Medical outsourcing• Christchurch meet & greet changes• ECW gear changes• Project storage space during field deployments and winter over• Meteorology observer training | RPSC panel, Steve Kottmeier-moderator |
| 11:15 – 11:30 | RPSC's role in the proposal review process | Patricia Jackson |
| 11:30 – 12:30 | LUNCH | |
| 12:30 – 2:00 | Topics for discussion and possible recommendation <ul style="list-style-type: none">• New project proposal: Gravity station relocation and Huddle test space• SuperDARN and possible EMI concerns• Crary Lab<ul style="list-style-type: none">○ When lab space is requested on SIPs and cannot be provided, grantees would like to have a dialog about the appropriateness of the new space○ Incompatible science in Crary Lab. In particular, grantees (and their equipment) who use radiocarbon as ecological tracers (mostly Phase I) should be kept separate from users who use radiocarbon to obtain ages (mostly Phase II)○ Dark room uses, microscope cameras, equipment acquisition | RPSC/Members, Peter Doran-moderator |
| 2:00 – 2:15 | BREAK | |
| 2:15 – 4:30 | Continued discussion of identified topics, finalize recommendations, close | |