

We would like to take this opportunity to welcome you to the
Department of Soil Science.



For more information about Soil Science and to put a face to the people in the Department, check out our Website:

http://www.umanitoba.ca/afs/soil_science

This **Orientation Handbook** listing is full of general guidelines and background information. It is meant to orient you to Departmental Procedures and to provide you with an up front guide as to where to direct any questions or concerns. Please feel free to contact support staff or faculty members.

Please read this entire document in detail as soon as possible. We hope you find your stay in the Soil Science Department a fun and rewarding, learning experience.

Edited By: Rob Ellis, April 20, 2015

Next Revision Due: April 2016

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Hands-On Training in the Soil Science Department

GENERAL

ELLIS BUILDING

The Ellis Building is occupied by the Department of Soil Science, Department of Food Science, Agriculture and Agri-Food Canada (AAFC) and the Provincial Soil Survey Unit. Students require permission to use facilities and equipment of the Department of Food Science, AAFC or Soil Survey. Your supervisor will coordinate permission with the appropriate director or head of these agencies.

KEYS AND BUILDING SECURITY

Each graduate student will be assigned a key that opens most of the labs, as well as the general office, photocopy room, etc. Summer and Visiting students will only receive keys that are deemed necessary.

Lynda Closson, Soil Science General Office (Rm 362), is responsible for key distribution. A \$25 deposit is required before keys are provided. The deposit will be refunded when the keys are returned.

These keys are for your use only and are not to be used to allow entrance of any unauthorized persons. During the evenings, weekends and holidays all outside doors must be kept locked. Remember this is for your security as well as to secure the building. Be sure that the office, laboratory, and building doors are locked when unoccupied and that all lights and instruments in your area, are turned off .

OFFICE SPACE

Office space will be assigned by the Head of the Department on a priority basis and according to the needs of the individual and the program involved.

PARKING

Parking for staff and students is available at various sites around the University of Manitoba' Fort Garry Campus. Applications can be made through the Parking Office in the Welcome Centre, 423 University Crescent. Please note that there is no free parking on campus. A valid parking pass must be displayed and you must park in designated parking stalls.

PHOTOCOPYING

Lynda Closson, Soil Science General Office (Rm 362) will assign you a code to access the photocopier. This is not to be shared and is only for copying essential to your research. Personal photocopies can be purchased through the Soil Science General Office.

OFFICE SUPPLIES

Basic office supplies are available from the Soil Science General Office. Supplies required for research purposes are to be purchased using your supervisor's funds.

Students are required to provide for their own resource materials for the classes they are attending.

COMPUTER SERVICES

The University of Manitoba computer network consists of a number of systems. To use these systems an official staff or student must create or “claim” one or more ids and passwords to get access.

a) To Claim a User Id:

- Information on computer accounts is at <https://umanitoba.ca/computing/ist/accounts/claimed.html>
- Claim your id: Don't forget your password.
- Student access to cns (Corporate Novell Server) can only be attained by sponsorship.
- Popular accounts and links are listed here: <http://umanitoba.ca/computing/ist/staff/servicecatalogueaccountsandpasswords.html>

b) Email

University email <http://umanitoba.ca/computing/ist/email/index.html>

You can access a webmail version of classic mail or Microsoft Exchange mail by browsing to <http://webmail.cc.umanitoba.ca/>

c) Antivirus

All computers attached to the University's network require antivirus software:

<http://umanitoba.ca/computing/ist/security/index.html>

d) Soil Science Computer Room

All computers require user ID login, with the password listed on the monitor. Please do not remove or install any software. Your work files can be kept in a folder created under the user folder. In many cases the user directory is on the D: or E: drive. Do not save to the root C: and refrain from leaving files on the desktop. You may leave files on the computer's hard drive if space allows but do not expect this to be a permanent storage solution. You are responsible for maintaining a copy of your own files. Storage on your Home (H): volume is an excellent way to backup but usually only of a limit of 15Mb.

e) Personal Computers

Machines brought from home can be connected to the network and the LAN. Laptops can be connected securely using wireless. Contact John Schoffner Ph. 9670 or Nonato Nitafin Ph. 8587 to receive an IP address for hardwired or have the Novell software installed.

f) Software

Once connected you can install or update software from U of M's Software Express:

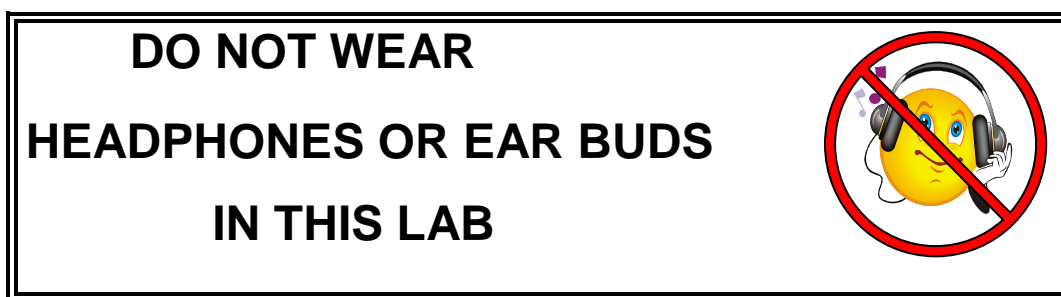
<https://webapps.cc.umanitoba.ca/software/>

RADIOS IN OFFICES, LABORATORIES AND OTHER WORK AREAS

The use of radios in offices and laboratories is permitted if the following guidelines are followed:

- (a) Radios are operated at volumes such that no noise results in hallways, adjacent laboratories or offices.
- (b) Radios should not be used in offices when other occupants are studying, writing reports, etc.

Use caution when working and wearing ear-buds from personal music devices. **These should not be used when working with any controlled Products** (ie chemicals in the Labs). In some labs and work areas, the use is not allowed at anytime and the following sign is posted at the entrance.



LOUNGES / KITCHEN AREA

A kitchen area is operated by the Graduate Students in Rm 385. This room contains a toaster, small oven and a microwave. As well, there is a fridge and freezer where personal lunches can be stored. **No human consumption food or beverages should be stored in any laboratory fridges or freezers.**

The Graduate students have a coffee fund, with the coffee pot in the Rm 386 Lounge. A second lounge is located in Rm 340, in the south wing. For more details about the coffee, contact the Graduate Student Rep.

TELEPHONES

- There are 3 phones available for general local use in the Department.
 - On the 1st floor, a phone is located in the hallway by Rm 277 (474-6038).
 - On the 2nd floor, a phone is located in the hallway by Rm 325 (474-6048) and in the kitchen room, Rm 385 (474-6038).
- Although these phones are toll restricted, you can make toll-free calls or you can make long distance personal calls using a calling card.
- If you have long distance University business calls to make, you need to get a calling card from your supervisor. These business cards are not to be used for personal calls.
- Push 4 first to get an outside line. For campus calls, when the phone # starts with 474, all you need to dial is the last 4 digits.
- Campus Security Emergency Number: 555 or (204)474-9341, (non-emergency: 9312).

- Cell Phone users with MTS or Rogers can make an emergency call using “#555”.
- Phones have been installed in all the Teaching Labs and Lecture Rooms, which have a button for connecting directly to UM Security Services. As well, 4 red emergency call boxes have been installed in the building’s hallways. All these emergency phones have speakers so that Security Services can use them as a public address (PA) system.



LABORATORY SPACE

Laboratory space and Teaching Lab access will be assigned by the Head of the Department, and/or your supervisor on a priority basis, according to needs of an individual and the program involved. Do not enter or work in areas / laboratories unless you have obtained permission from the person in charge. **Also do not remove anything from the Laboratories (including glassware, chemicals, balances, etc.) without permission.**

Movement of any balances between labs and booking time in a Teaching Lab needs to be coordinated by Rob Ellis.

- (a) Please obtain permission from the faculty member or technician in charge of equipment before you use it. This will allow the technical staff to provide you with assistance and training.
- (b) **CLEAN UP:** Clean up all laboratory space and equipment after use. Make sure equipment is maintained and ready for another user. Report any equipment malfunction to the person in charge of the lab.
- (c) Growth Chambers and the Growth Room: Requests for plant growth space should be submitted to Bo Pan. Procedures to be followed for maintenance of growth chambers and growth rooms will be provided after space is allocated. Be sure to fill in the “Record of Operation” form for growth chamber use.



Junior Soils Laboratory, Rm 318

INTERNAL DEPARTMENTAL CHARGES

There are a number of procedures and analyses that are performed using general use Departmental Equipment. These do not have on-going funding, so money is collected from the users to provide funds for replacement, parts and servicing. Use of equipment is recorded in log books, along with the chargeable account number.

Current Chargeable Procedures are:

1) Autoanalyzer Analysis, Rm 300

Initial training and troubleshooting is provided. Students perform the actual work and there is a charge of \$1.00 per colorimeter used.

2) Deionized Water, Rm 300

Water usage is recorded, consumable charges of \$0.50/L are passed on to the appropriate budgets.

3) Acid Digestions Rm 302

The charge is \$20 per digestion cycle, for the Departmental Westco Block Digester.

4) Soil Grinder, Soils Shed

This charge is applicable to all University personnel using the rolling mill grinder and the pulverizing grinder.

The charge is \$0.50 / L of soil to be ground. The max sample size is 1L. After that, it is recorded as an additional sample for each extra L or part L.

5)Tractor Use (including the Giddings Corer)

Rates are \$60/day use for a tractor by Department of Soil Science staff and students. Please send your planned dates to use tractors to Tim Stem, so we can sort out potential conflicts.



LAB COAT CLEANING

Soil Science lab coats will be picked up by Perth's Tuesday mornings and returned the following Tuesday.

- Take the lab coat to Rm 383, make sure your name is clearly written with permanent marker and place it in the supplied laundry bag or box.
- On the sheet provided, record your name, your Supervisors name and the number of lab coats. (your Supervisor will subsequently be charged for the cleaning)
- Pick up your coat the following week.
- Do not take your lab coat home for cleaning.

WHO DO I ASK ??

Following is a list of the different laboratories as well as the professors and support staff who can assist you with any questions you might have about their particular area of expertise:

Soil Science Department Head	Paul Bullock
Radioisotope Permitted Laboratories	Annemieke Farenhorst, Rob Ellis
Soil Science Shed, grinding rooms, sample drying and growth chambers, vehicle use, pesticide storage and use	Tim Stem
Gamma Spectrometer	David Lobb
Pesticide Research Laboratories	Annemieke Farenhorst
Agrometeorology Labs	Paul Bullock
Soil Chemistry Laboratories	Don Flaten
Soil Physics Laboratories	Wole Akinremi
Soil Mineralogy Laboratories	Tee Boon Goh
Colormetric Auto Analyzer	Rob Ellis
Organic Analysis, IC, GC, HPLC Analysis	Bo Pan
Soil Ecology Laboratories	Mario Tenuta
Hazardous Waste Disposal, Department Safety Officer,	Rob Ellis

LABORATORY OPERATIONS

UNIVERSITY OF MANITOBA SAFETY PROGRAMS

Staff and Students are to follow Departmental and University safety policies governing the use of chemicals and general good laboratory procedures (GLPs).

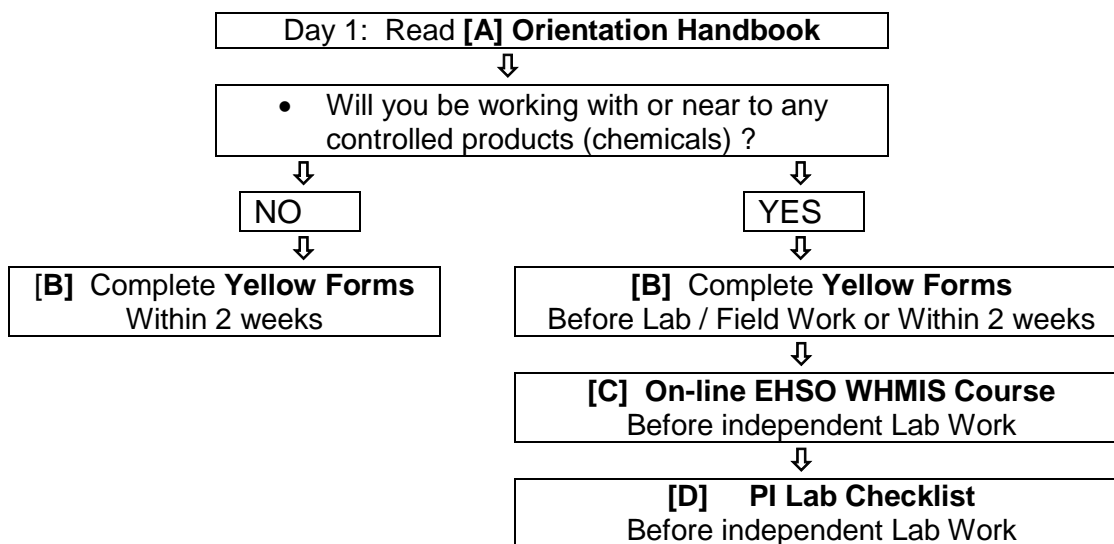
WORKING ALONE POLICY

The following activities are discouraged from being conducted outside of normal working hours. If it is necessary to conduct these activities in evenings or weekends, a buddy system must be established with clear lines of communication. The risk will be assessed for each of these and a formal procedure will be established by the Supervisor. Documentation on the procedure must follow the University forms found at:

http://umanitoba.ca/admin/goverance/governing_documents/staff/839.htm

Activities at risk:

- a) motorized equipment in shed and laboratories, including grinders, saws and threshing machines.
- b) Field activities of any type.
- c) Chemistry activities with a possibility of burns or other trauma.

This is the TRAINING SEQUENCE we follow in the Soil Science Department:**[A] Orientation Handbook**

- You will be provided with a hardcopy of the booklet, read and pay special attention to all safety related topics. It is also available on the Soil Science Website

http://umanitoba.ca/faculties/afs/dept/soil_science/media/pdf/Orientation_Booklet_Apr_20_2015.pdf

[B] Yellow Forms

- View the “Health and Safety General Orientation Presentation” that is located on-line with the U of M Safety Office.
- http://umanitoba.ca/admin/vp_admin/risk_management/ehso/training/index.html
Click on : Introduction to Health and Safety Programs at University of Manitoba
- When you have completed the 3 presentation quizzes on the yellow forms, you and your supervisor are to sign the acknowledgement page. Return it to Rob Ellis.

[C] On-line EHSO WHMIS Course

- Follow the WHMIS Tutorial:
- http://www.umanitoba.ca/admin/vp_admin/risk_management/ehso/media/WHMIS_Online_Training_Presentation_BK.pdf
- Then complete the Lab WHMIS test:
<http://fluidsurveys.com/s/uofmwhmislab/>
- When you have successfully completed the test, print out the acknowledgement page and turn it into the WHMIS Coordinator (Rob Ellis)

[D] Laboratory Safety Checklist for New Lab Personnel.

- You and your Supervisor (or Supervisor’s Designate) will review and discuss the associated risks for your assigned duties and work areas, plus the personal protection equipment that is available.
- When the checklist has been completed and signed, return it to Rob Ellis.



Additional specific Lab / Field Safety Training will be provided or directed to you, by your Supervisor.

VOLUNTEERS AND MINORS IN LABORATORIES

There is a University of Manitoba policy and procedure regarding the use of volunteers and the access of minors to Laboratories or other hazardous areas.

The policy addresses the requirement that volunteers need to have safe and rewarding experiences on campus. It also includes a parental consent/waiver form for minors.

For more information see:

www.umanitoba.ca/admin/governance/governing_documents/staff/810.htm

www.umanitoba.ca/admin/governance/governing_documents/staff/812.htm

For additional information on Safety Items check the UM Environmental Health and Safety Office (EHSO) website.

http://www.umanitoba.ca/admin/human_resources/ehso/

University of Manitoba - Health and Safety Policy

www.umanitoba.ca/admin/governance/governing_documents/staff/551.htm

University of Manitoba - Laboratory Safety Training Standards

www.umanitoba.ca/admin/governance/governing_documents/operatioions/800.htm

GENERAL LAB SAFETY

You will be provided with safety glasses and any other required safety equipment by your Supervisor, keep them clean and readily available.



- (a) Before entering any Lab, check the Workplace Hazard Information Placard (WHIP sign) on the entrance door. This sign will identify the entrance requirements and Personnel Protective Equipment required. The PPE icons identified by a red border are mandatory before you enter, Other PPE may be required, dependent on the procedures being performed in the Lab.



UM Workplace Hazardous Information Placard (WHIP), In-Lab Signage

- (b) **No food or drink (including water bottles) are allowed to be in any of the labs.** So enjoy your breaks in your office or a lunch room and return refreshed to the lab, when you are finished.
- (c) **Lab footwear must have a stable sole with a closed heel and toe.** This excludes any sandals, flip-flops or slip-ons from being worn in the lab or when doing laboratory work anywhere else in the building.
- (d) There are lockers available in the south wing , 2nd floor, for personnel that have not been assigned an office. This is where personal belongings such as jackets and backpacks should be stored, **rather than on Lab counters.**
- (e) Lab coats and other protective wear are worn to prevent debris and contamination from reaching your personal clothing. Therefore it **should not be worn** in common areas such as the Lunch lounge or conference rooms.
- (f) Gloves are used in many of the labs to protect you from contamination. Therefore gloved hands should not be used for handling items that other people will be using without gloves. This would include **door handles**, phones and keyboards.
- (g) For your own protection, laboratory coats and eye protection should always be used when handling hazardous chemicals such as when dispensing strong acids and bases, and when digesting soil or plant material. Always use fume hoods to dispense chemicals with poisonous or corrosive fumes.



- (h) In accordance with Workplace Hazardous Materials Information System (WHMIS) guidelines, there is a hard copy of the Material Safety Data Sheet (in Rm 368) for all control products in the laboratories. Everyone should read the appropriate sheets and be aware of the precautions before they begin working with a chemical.
- (i) Always obtain proper instruction in use of all chemicals and equipment from your supervisor or technician in charge of the laboratory.
- (j) Chemical solutions or extracts should not be transported through the building in unprotected glass containers. Use a secondary plastic container such as a safety bucket or tub that will contain the volume of the solution, if the glass container should break. A stable cart would be appropriate as long as the sides are fluid tight.
- (k) Use the cylinder carts provided for handling tanks of compressed gases. Always secure container to the wall or a laboratory bench with appropriate straps or chains.
- (l) There is a common storage area that has been designated for bulk flammable chemicals, in the Food Science Pilot Plant, Rm 216L. Temporary storage fire cabinets are also provided in the various laboratories.
- (m) If you have any concerns or doubts about the safety of any procedures or experiments that you are performing, stop work immediately and seek advice from your supervisor or appropriate support staff.

CHEMICAL ORDERING PROCEDURE

All order forms that contain a chemical must be delivered to Rob Ellis before going to the General Office for purchasing. This ordering procedure has 3 purposes:

- a) Chemicals will be scrutinized to ensure that grades, specifications and quantities of chemicals are correct.
- b) Requested chemicals will be compared against our list of surplus chemicals.
- c) Chemicals will start the process of being entered into our Department's Chemical Inventory List, as well as the list of Material Safety Data Sheets.

The order forms need to be complete, including authorizing signature, budget acct #, quantity, size, product # and actual name of the chemical.

When the order is delivered to our building, it will be held in our Chemical Storage, Handling and Waste Room (Rm 383) until the processing of the new chemical has been completed.

A Soil Science inventory sticker will be attached to the container and the product information will be logged into the UM Chemical Inventory Data Base. Every

chemical container received and those currently on hand will get their own unique inventory number.

Do not take the chemical away until it has been logged in.

When the chemical has all been used, the container must be washed and returned to Rm 383. The container will subsequently be disposed after it has been removed from the inventory list. If you wish to get the container back, stick a note on it when it is dropped off.

CHEMICAL USE

Chemicals come in a wide range of analytical grades and specifications. Determine that you are using the appropriate grade for your procedure.

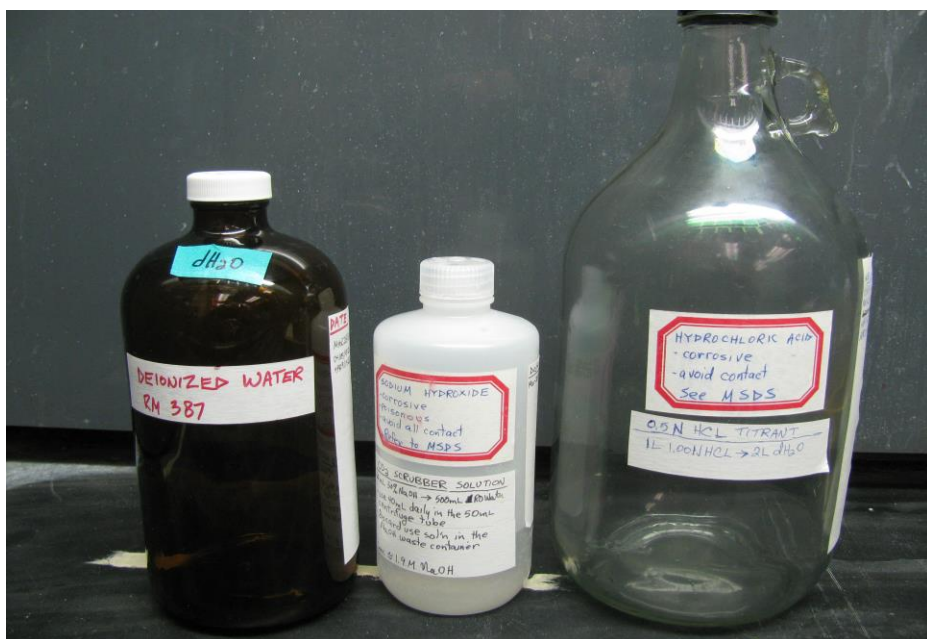
Follow all appropriate safety precautions.

Record data in a preparation log book, include preparation date, manufacturer name, product #, lot #, chemical name, amount and final volume.

Chemicals that are removed from a bottle should never be returned.

Clean any residue from the balance or work area.

The SOP for preparing a proper workplace label is posted in all the labs.



A WHMIS workplace label must be attached to all containers of control products:

- prepared and used in the University workplaces.
- decanted or transferred from the original supplier container.
- on which the original supplier label has been removed or is unreadable

HAZARDOUS WASTE DISPOSAL

Waste stream charts are posted in all the laboratories. There are special boxes labeled for broken glass, orange 3L tubs for non-biological sharps and rigid plastic containers for used pipette tips. They are located in various labs throughout the building. All these sharps containers are dropped off at Rm 383, for disposal.



Glass



Non-Biological Sharps



Pipette Tips

Notify the technician in charge of the laboratory of any breakage. As well, pass on any other information concerning equipment contamination or shortage of chemicals and/or glassware.

Laboratory waste must be disposed based on the information listed in the University of Manitoba flowchart for Disposal of Laboratory Waste. This is posted in all Laboratories. For more information on waste disposal procedures refer to the University of Manitoba Safety Office website.

All hazardous waste has to be stored in labelled containers that are appropriate for that particular waste (must sit in a secondary containment tray). When the container is full, it should be taken to Rm 383 for subsequent disposal through the Safety Office.

All waste needs to be clearly identified and labeled. Discarding unknown waste through the Safety Office is very expensive because extra testing is involved. These costs are charged back directly to the Soil Science Department.

Rm 383 is also the area where orphaned or abandoned chemicals have been stored. Be aware of what chemicals are available before ordering new chemicals.

RADIOISOTOPE LABORATORIES

- a) All Laboratories that contain radioisotopes or any labeled material have a radiation sticker on the door. **These labs doors must be shut and locked whenever the labs are not occupied.**
- b) Laboratories in the Ellis Building that have been licensed for the handling and storage of radioisotopes include Rooms: 310, 316, 373, 374, 379 and 383.
- c) Licenses are issued by the Canadian Nuclear Safety Commission (CNSC) and CNSC officers regularly inspect our laboratories to ensure compliance with licensing conditions. All regulations regarding the handling and storage of radioisotopes must be adhered to. Furthermore, the Universities guidelines for documentation of radioisotope use must be met.
- d) Do not use radioisotopes unless you have been instructed in their safe use and storage. These procedures are outlined in the University of Manitoba's Radiation Safety Manual and are available from your supervisor. The University of Manitoba offers a short course on radioisotope safety and it is mandatory that you attend this course, prior to beginning your radioisotope work.
- e) All Radioisotope labeled material must be disposed through the University Safety Office. There is a schedule for potential pick-ups at the Fort Garry campus posted in the main Radioisotope Lab, Rm 316.
- f) For further information regarding the safe handling and storage of radioisotopes please contact your supervisor, Rob Ellis or Leona Page (Radiation Safety Coordinator, University of Manitoba) at 789-3613.

Louis Pasteur...

“ Chance favours the trained mind.”

Rob Ellis...

“ Safety favours the prepared mind.”

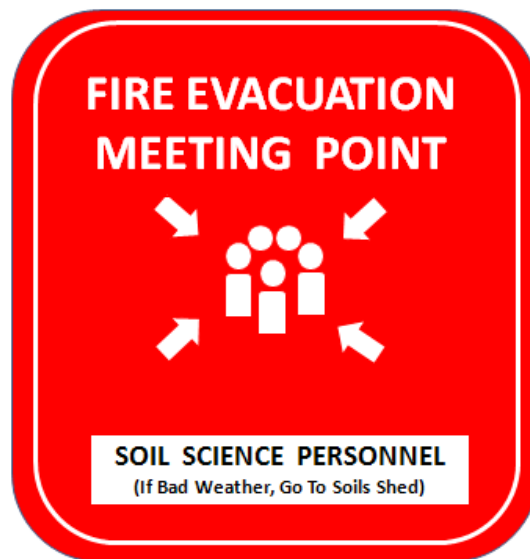
BUILDING EMERGENCIES

ELLIS BLDG EVACUATION LOCATIONS

We have 2 initial check-in points, during a building evacuation, for all personnel in the Building.

Initial Check-in Points:

- **Soil Science Dept, Prov. and Cdn. Soil Survey** – East side of North Wing, between the Bldg and the Soils Shed , near to W Parking Lot.
- **Food Science Dept** – north side of South Wing, between exit doors and picnic tables



WHAT TO DO, IF YOU DISCOVER OR SUSPECT A FIRE

- a) The fire alarm should be activated by pulling the alarm pull station, before any attempt to fight the fire begins.
- b) Alarm pull stations are located by all the stairwells and exits to the building. When activated the alarm sounds locally and is monitored by Physical Plant and Security Services, who automatically call the Winnipeg Fire Department.
- c) The Emergency Exit Plans for the individual zones of the building are posted in the hallways. These plans detail the location of pull stations, fire extinguishers, fire hoses and multiple exit routes. Additional information is posted at all the fire alarm pull stations.
- d) Additionally, if there is an actual fire or building evacuation emergency (from a safe location) contact UM Security Services, directly at 555. They will coordinate subsequent calls for emergency assistance, will respond to the scene in person and direct outside Emergency Services to your specific location on campus.

WHAT TO DO, WHEN THE ALARM SOUNDS

- a) Cease all activities. Turn off heat producing devices. Leave overhead lights on.
- b) If safe to do so, close all doors and windows in the immediate area.
- c) Evacuate the building, using the nearest safe exit.
- d) Follow all additional directions provided to you by the Building Fire Wardens.
- e) Once outside, proceed around the building to your assigned meeting spot.
- f) Clip boards are located inside the building, near these meeting spots, which have a list of personnel. These clip boards can be picked up by anyone as they exit. Once outside, make sure your name has been checked off, before leaving the area.
- g) If there is a foul weather problem or some other reason for us to take shelter, the secondary meeting spot for all Ellis Building personnel will be the Soil Science Shed. There are back up copies of the check-in sheets, located in the Shed. If there is an evacuation in our building, then all work should be stopped in the Soils Shed and the areas cleared to make room for emergency shelter.
- h) Remain outside the building until the most senior member of the Fire Department, the University Fire Marshall or Physical Plant Staff give the "All Clear" **and the alarm bells have stopped ringing.**



Soil Science Shed (Foul Weather Meeting Spot)

SOIL SCIENCE SHED ALARM

A monitored fire alarm system and emergency lighting has been installed in the Soil Science Equipment Shed. The system does not use smoke detectors, it uses fixed temperature heat detectors and exit pull stations.

The alarm is a 2 second pulsating horn as versus the alarm bell in the Ellis Bldg. If the alarm was to activate, leave through the closest exit, closing as many door as it is safe to do. Meet at the primary Soil Science Check-in Point, W parking Lot.

Even though the Fire Department is automatically notified, the alarm is not indicated in the Ellis Bldg. Let the Soil Science Office know about the Shed alarm and the Office will request that our Bldg. Fire Warden respond.



FIRE WARDEN RESPONSIBILITIES

Fire wardens are responsible for sweeping their assigned areas, if safe to do so, and reporting to the Chief Fire Warden at the annunciator panel. Fire wardens then monitor the entrances to prevent anyone from re-entering the Bldg, before the alarm has been silenced and the “All Clear” given. The Chief Fire Warden then will communicate with the Fire Dept and the Power Engineer as to any specific fire information or where personnel may be located that have not left the building.

Some or all Fire Wardens may be away from the building during a Fire Alarm. Senior personnel are expected to assist the Fire Wardens and act according to the Building Fire Plan.

For more information on your responsibilities during a fire/evacuation alarm, please refer to the EHSO web page at

www.umanitoba.ca/admin/human_resources/ehso/firelife_safety/index.html

FIRST AID TREATMENT

- (a) First aid kits are located in a number of labs, in the Soils Shed and in all the field vehicles. There is signage on the doors of the labs that contain first aid kits. The field vehicles also contain a blanket, a flashlight, spare batteries and a tow rope.
- (b) The kits are checked regularly, but if there is a problem with a kit or the contents need to be repacked after use, contact Rob Ellis.



Field Vehicle Emergency Kit Supplies

- (c) The list of the Departmental Certified First Aiders is posted at each first aid station.
- (d) In the event of any work-related injury or accident, after treatment, report as soon as practical to your supervisor.
- (e) **All injuries should be documented on the green Workers Compensation Board (WCB) Notice of Injury, Green Cards** by the employee. The original form is stored with the Safety Officer, a copy is provided to the employee, the supervisor and faxed to EHSO (204-474-7629).
- (f) These green notification forms are available on the bulletin board, outside of the main office Rm 362. If there is a loss of work time or if medical attention was required, then the employee needs to phone in a claim to the WCB at (204) 954-4100.

www.umanitoba.ca/admin/human_resources/ehso/occ_health_comp/aiwcb.html

Department of Soil Science

Certified First Aiders (Nov 14, 2013 – Nov 14, 2015)

Paul Bullock Rm. 364 Ph# 8666

Rob Ellis Rm. 303 Ph# 8662

Bo Pan Rm.372 Ph# 7884

Brad Sparling Rm. 310 Ph# (204) 223-6930

Tim Stem Rm. 270 Ph# 8014
Shed Ph# 9197

For an Intercom Page Ph# 8153



You never know what surprises you will meet, when you head out for Field Work

FIELD WORK



USER RESPONSIBILITIES OF FIELD EQUIPMENT

- (a) Please do not use equipment without authorization and proper instruction about its use. See Tim Stem regarding operating equipment.
- (b) Operate equipment at moderate speeds and loads.
- (c) Report any breakages or problems to Tim Stem.
- (d) Do not attempt to repair equipment unless qualified to do so such as repairs of a minor nature.
- (e) Clean equipment after use. (Field sprayers used for pesticides must be thoroughly cleaned after use with dilute aqueous ammonia and water).**
- (f) Check brakes, brake lights, running lights, and tires on trailers and other equipment, every time it is hooked to a vehicle.
- (g) Lubricate and maintain all equipment as outlined by field technicians or the service manual.
- (h) Students should report the need for provision of field supplies such as seed, pesticides and fertilizers, as well as laboratory chemicals and supplies to their supervisor.

VEHICLE USE

- (a) All drivers must have a valid driver's License. As of May 6, 2015, prior to using any vehicle, you must have already submitted a photocopy of your valid Driver's License along with the declaration form located at the vehicle booking bulletin board.
- (b) The Dept owns and operates a number of vehicles, which are allocated on a priority basis. Some vehicles have been assigned to faculty or staff members for use on specific projects, others are for casual bookings. Calendars for vehicle bookings are posted in the hallway by Rm 362. **All vehicles, including assigned ones, must be signed out on the calendars with time periods for their use.** Do not use vehicles unless you have received permission from the faculty member to whom the vehicle has been assigned or from Tim Stem.
- (c) The vehicle keys are stored in a security safe, in the main office, Rm 362.
- (d) Always complete the log book provided with each vehicle. Odometer readings prior to and after each trip **must** be recorded, in ink. All purchases for gasoline, oil changes, etc., must be recorded and the log entries must be signed. Indicate the project budget number (**FOAP**) to which mileage should be assigned.
- (e) Tune-ups and major repairs are provided by the Department, but only after permission is given by Tim Stem. Day to day maintenance (oil changes, car washes, etc.) is the responsibility of the user of the vehicle.
- (f) No personal use of vehicles is permitted.
- (g) Contravention of any traffic law is the sole responsibility of the user.
- (h) Use only the credit cards provided for each vehicle. Do not transfer credit cards among vehicles.
- (i) In case of an accident follow normal Autopac guidelines:
 - (ii) Obtain license plate numbers of all vehicles involved.
 - (iii) Obtain names and address of all drivers and witnesses.
 - (iv) Record place and time of accident.
 - (v) Manitoba Public Insurance can assist you in determining if you must report your accident to the police when you call to make a claim. There is no need to report a straight forward fender bender to the police. But if there was a fatality, hospitalization because of injury, an unregistered vehicle, an unidentified vehicle, you failed to get the driver's particulars or you suspect the other driver was under the influence of alcohol or drugs, then the police must be contacted immediately.
 - (vi) The accident should also be reported to the Department Head, Autopac and the Campus Police.
- (j) If a vehicle breaks down within the city limits, you can make arrangements to have it towed to Dynamic Auto at 967 St Mary's Rd (204-257-0244). You can contact Crane towing at (204) 489-3727 or Dr Hook Towing at (204)956-4665.

- (k) Your Supervisor is responsible for arranging rural roadside emergency service contacts, for research sites. This info can be included on the Off-Campus Research Location Form.

Vehicle Pre-Use Inspection

Daily Pre-Use Inspection is a condition of use for all Soil Science Vehicles. The inspection is recommended for every time you use the vehicle but is **required** if the vehicle is going outside of the Perimeter Hwy.

The Driver is responsible for seeing that the Pre-Use Inspection has been completed before departure.

If you have any question on how to complete the inspection or if you find a problem contact Tim Stem 474-8014 (tim.stem@umanitoba.ca)

Vehicle Pre-Use Inspection

- Tire Pressure?
- Fluid Levels?
- Emergency Supplies?
(First Aid Kit, Flashlight, Extra Batteries, Blanket, Tow Rope)
- Windows Clear?
- Ready for heat/cold?
- Load Secured?
- Any Vehicle Damage?
- All Lights Working?

SOIL SCIENCE DEPARTMENT
Effective April 8, 2015

Bio Security Field Protocols

Purpose:

Ensure individuals working in producer fields are following proper stewardship protocols to minimize the spread of soil-borne pests to uninfected fields.

Background:

Soil-borne pests (e.g. clubroot, soybean cyst nematode) are problematic because of persistence in soils, and limited crop protection products. Precautions must be taken to minimize the transfer of soil and to disinfect equipment by which soil can be transferred in order to reduce the risk of infecting fields that are not currently affected by these pests.

1. Target Fields

- The personal protective clothing protocols apply to all producer fields where research personnel will be entering the field. Personal protective clothing is not intended for the university research farms (Glenlea, Carman) as well as the Kelburn Farm.
- The protocols for field entry, vehicle and wheeled equipment sanitation, small tool sanitation and disinfectant apply to all fields.
- *Note: Special conditions apply to the Kelburn Farm.* There is to be no department vehicles taken into the fields at Kelburn. For those conducting fieldwork at this location, department vehicles are to be driven down the grid road directly to the Kelburn yard. Make arrangements with Brian Hellegards (204 269-2722, Kelburn@richardson.ca) to use one of their vehicles that has been designated to go between the fields and the yard. These protocols have been implemented under the auspices of the Canadian Food Inspection Agency and it is critical to follow them completely!

2. Personal Protective Clothing (Producer Fields)

- Personal protective clothing should be utilized prior to entering any producer field.
- Disposable boots or Rubber-soled footwear that can be washed/cleaned (rubber soled shoes/boots or rubber boots) and disinfected between fields should be worn.
- Non-disposable footwear should be scraped clean of visible soil, washed and disinfected before next field.
- Disposable gloves and coveralls should be used, if not, hands (and any other body parts) that may be covered with soil should be washed/cleaned and a hand sanitizer used before leaving the field.
- All disposable boots, gloves and coveralls should be removed at the edge of the field and placed in a garbage bag for disposal after returning to the department.

3. Field Entry (All Fields)

- Whenever possible, field visits should be done on foot
- Vehicles should be parked, on the municipal road or in the approach and not in fields
- When doing field inspections with a grower, if required to travel in a vehicle, travel in the grower's vehicle.
- Try to reduce field visits when the field is muddy

4. Vehicle and Wheeled Equipment Sanitation (All Fields)

- All vehicles and wheeled equipment (quads, trailers, sprayers, etc.) entering any field must be cleaned after use. Upon leaving the field you should:
 - Rough clean, which includes knocking or scraping off soil clumps in the field, then
 - Fine clean, using compressed air to blow off remaining soil (if light texture soil and soil is dry) or for loams and clays and wet soil, washing with water to rinse off remaining soil. It is preferred that this be done at the field approach, but it could be done at a nearby carwash (tires, wheels and undercarriage, especially wheel wells and anywhere else mud may have stuck).
- Vehicles and wheeled equipment entering more than 1 field per day must be rough cleaned and fine cleaned between exiting one field and entering the next.
- Vehicles and wheeled equipment used in the field and returned to the department must be cleaned before being taken out.

5. Small Tool Sanitation (All Fields)

- All small tools (augers, shovels, trowels, etc.) entering any field must be cleaned after use. Upon leaving the field you should:
 - Rough clean, which includes knocking or scraping off soil clumps in the field, then
 - Fine clean, using compressed air to blow off remaining soil (if light texture soil and soil is dry) or for loams and clays and wet soil, washing with water to rinse off remaining soil. It is preferred that this be done at the field approach, but it could be done at a nearby carwash.
 - Spray down the equipment with disinfectant, coating all surfaces for at least 10 minutes to allow the disinfectant to kill any pests that may be present.
- Disinfection of the small tools may be done after returning from the field to the department, but must be cleaned before being taken out to be used again.
- Small tools used in more than 1 producer field per day must be rough cleaned, fine cleaned and disinfected between exiting one field and entering the next. Therefore, disinfectant and its application apparatus must be carried for use in the field in this circumstance.

6. Disinfectant (All Fields)

- 2% concentration of Virkon (i.e. 40 g dry product per 2 litres of water)
- Preparation protocols
 - Virkon solution should be mixed fresh prior to use each day and placed in a container with both a permanent and temporary label
 - Permanent Label
 - 2% Virkon Solution
 - Discard by end of Shift Day 3 as domestic waste.
 - Owner: _____
 - Temporary Label
 - Technician's name: _____
 - Preparation Date: _____
 - Expiry Date: _____
 - Do not use Virkon solution that is more than 3 days old as a disinfectant.

7. Communication and Application

- These protocols will be communicated to department staff via email, the Soiled Profile and during the spring orientation each year.
- The protocols will be provided to any producer, research collaborator or research funding agency that requests the information from the Department of Soil Science.
- These protocols can be utilized in agreements for use of producer fields for research purposes in the Department of Soil Science. PIs may want to include a waiver in regards to bio-security from producers as part of an agreement for access to their fields.
- Individual department PIs will be responsible for the conduct of the personnel in their research programs. It is recommended that the MAFRD bio-security checklist (attached) should be used to document the bio-security measures that have been taken for the purpose of field work and that these be kept on file.
- In case of dispute, the documentation for cleaned vehicles, equipment and small tools will be used as evidence that protocols were followed at each field. Each PI will be responsible for managing these documents for their research projects.

FIELD PLOTS AND FARM COOPERATORS

- (a) Field plots are located on farmer owned land. Care must be taken to ensure the owner's continued cooperation with the Department.
- (b) Please do not drive across farm fields, particularly when cropped, without prior permission of the owner of the land and your supervisor.
- (c) Do not infest farm fields with weeds. Adequate weed control must be provided or the plot must be tilled and worked-down prior to formation of weed seeds.

PESTICIDE HANDLING AND STORAGE (Contact Tim Stem for details)

Before working with any pesticides that require the use of a respirator, all staff and students must complete the 2 step respirator fit testing process. First you must submit a confidential medical surveillance form to be assessed by the Occupational Health Nurse at EHSO.

Once medically cleared, you will be fit tested using a quantitative method by a Technician at EHSO, using North half mask respirators.

For details on fit testing contact Rob Ellis or view the information at EHSO (http://umanitoba.ca/admin/human_resources/ehso/emanagement/rpd.htm)

- (a) Use appropriate clean apparel when handling pesticides. This may include:
 - rubber gloves
 - Disposable Tyvex Suit
 - rubber boots
 - respirator in proper working condition
 - goggles
- Do not store any Personal Protective Equipment inside the Pesticide Storage Room.** This equipment will be provided to each field research team by their supervisor. After using pesticides, thoroughly wash all clothing and parts of the body that may have been exposed.
- (b) Do not remove pesticides from storage area without permission of your supervisor.
- (c) Read all labels on pesticide containers prior to use and obtain instructions for use from field technicians and/or your supervisor.
- (d) For your own safety please ensure that you do not transport pesticides inside the passenger compartment of any vehicle.
- (e) In case of pesticide spills, or other accidents with pesticides, contact Dr. Farenhorst or Tim Stem. If health of person(s) is endangered, contact nearest hospital or medical office immediately.
- (f) Pesticides and Laundry. To ensure your safety and the removal of all or nearly all the pesticide from clothing that has been contaminated by a spill, the following steps should be followed:
 - Keep the clothes, used during pesticide application, separate from the family wash. Use plastic bags to ensure this separation.
 - Use a “pre-spray” laundry aid (Spray and Wash, Stain Away, etc.) before starting the wash with detergent.
 - Set the washing machine temperature to hot.
 - Use the full amount of detergent recommended on the box.
 - Wash the clothing two or three times before reusing them.
 - Dry clothing outside, not in dryer.

- When selecting clothing to wear while applying pesticides, it is best to avoid “perma-press” type fabrics, because these are harder to launder to a pesticide-free condition.

HANDLING OF SOIL AND PLANT SAMPLES

- (a) Soil samples may be stored unprocessed and just refrigerated or frozen, dried only or dried and ground. Confirm your sampling protocol with your supervisor.
- (b) Small soil samples: Use plastic bags for field soil samples. After drying and grinding they can be stored in small paper containers that are provided by your supervisor. Grinding facilities are located in the Soil Science shed. Please do not use drying room or grinding room for storage.
- (c) Large bulk soil samples for growth studies: Use large woven plastic bags for obtaining soils for pot studies. Please do not use cloth bags. Dry soil samples in the drying room and sieve to desired size using soil sieving table located in the Soil Science shed. Return soil to large plastic bags and store in Soil Science shed (equipment storage area). **DO NOT** store or prepare soil in the growth chamber room.
- (d) Plant samples: Please use cloth bags for plant samples and dry in drying oven or drying room in Soil Science shed. After grinding place plant samples in plastic bags. **DO NOT** store or prepare plant samples in the growth chamber room.
- (e) Arrange for use of drying room, drying oven, grinding facilities, etc., with Tim Stem.
- (f) Label all soil and plant samples with date, name and location.
- (g) Please clean up after yourself. There are many people that use these facilities. If everyone cleans up after themselves, things will run smoothly.
- (h) All cloth bags and large plastic bags should be cleaned and returned to their proper storage area.

FIELD SITE REGISTRATION FORM

This form is completed / updated at the beginning of each field season. A copy of the form is stored in the Main Office Rm 362 Ellis.

The record of the legal locations and road directions on this form provides a means of directing emergency help to a remote site.

The blank forms are located at the Vehicle Booking Calendar bulletin board.

OFFICE PROCEDURES

Purchases

There are various ways to purchase needed supplies and materials through the University of Manitoba. There are purchase orders, VISA orders, as well as petty cash. Essentially, if any money is spent, there must be a paper trail processed through our general office. Please ensure that all purchases are approved by your supervisor prior to the purchase and that a budget number is obtained. If you are unsure at all regarding any of the procedures, please ask Lynda, Jennifer or Terri.

Travel Policies and Procedures

General travel policies and procedures are explained at the following address on the University of Manitoba website:

http://www.umanitoba.ca/admin/financial_services/travel/index.shtml and it is to your advantage to familiarize yourself with them. Travel expenses are reimbursed to you by direct deposit. Allow approximately 2 weeks for processing once all forms have been submitted to administration. Forms related to travel (except conference registration) are available on the bulletin board outside the general office. For Department policies, please follow these procedures:

- To register for a conference or workshop – fill out the registration form and submit it to Lynda, along with a copy of the conference particulars.
- To purchase a plane ticket: (a) see Lynda or Terri for a numbered Travel Authorization form, obtain a budget number from your supervisor and his/her signature before proceeding. Make sure you retain all your flight documentation (ticket, itinerary, e-ticket and boarding passes) as these documents must be turned in after your trip, when you submit your travel claim information.

To claim reimbursement for travel expenses check with your supervisor on whether you will be required to keep your meal receipts or claim a daily per diem.

Maximum Per Diem Allowance (all countries):

Within Canada: \$50 CDN (Partial per diem: Breakfast-\$10, Lunch-\$15, Supper-\$25)

Outside Canada: \$60 CDN (Partial: Breakfast-\$15, Lunch- \$15, Supper-\$30)

Keep all expense receipts (meals, taxis, accommodation) related to your trip. On your return, complete a Travel Claim form as soon as possible, attach your receipts and have your supervisor sign their approval, then submit it to Lynda. Supply as much information about your trip as possible, including whether you shared lodgings, paid for another person's expenses, etc. If you did not travel by plane, supply information on the transportation you used. If by private car, we require information on the back of the form to be filled in with regard to your vehicle and mileage. If you do not have accommodation then an explanation must be included.

Payroll

Appointment forms should be processed 2 weeks prior to your start date. This includes a Personal Information Form as well as a Direct Deposit Authorization which requests your

banking information. We know that this timeline is not always possible, but keep in mind your first payment may be delayed if this information is not received in time. Please see Terri Ramm in the Soil Science Office (Rm 366) to both receive the forms and to provide the required information to initiate the appointment.

Timesheets

Hourly employee and student timesheets must be completed, approved by your supervisor and submitted to Lynda before Noon on Fridays. Employees supervised by Dr Tenuta should go directly to Lynda.

Biweekly staff must report any extra hours worked or time off (i.e. vacation, overtime, medical appointment, sick time etc) to Terri before Noon on Fridays.

Accessing Your Pay Statement

The University does not issue paper pay statements. To access your pay statement you need to sign up for JUMP <http://jump.umanitoba.ca/cp/login/>. In order to do this you will need to have a University of Manitoba employee number. If you have not received your number, please see Lynda Closson in Rm 362 Ellis. Instructions on how to access JUMP can be found on the login page under "how do I log in". Once you have access to JUMP: log in, click on the My JUMP tab and your earning statement will show up on that page.

Casual hourly employees will receive their hourly salary, plus 6% vacation pay. Please note that the first line of your pay will be the hourly wage (e.g. 70 x \$13.21). The next line is where your vacation pay (6%) shows up. The two amounts together will be the salary plus 6%. (e.g. Line 1 – 70 hrs x 13.21 = 924.70); (Line 2 – 55.30 (6%) – Total salary is \$980.00. You will also notice that if there has been a statutory holiday, your net pay will change. This is because you have already been paid vacation pay and they do an adjustment to your pay for a statutory holiday.

Change of Address or Marital Status

If you change your address or marital status, an Employee Record Change Form must be filled out and returned to Terri Ramm as soon as possible. Students are also required to complete a Change of Address Form through the Student Records Office.

Time Off

Whenever time from work is missed (sickness, medical appointments, vacation time, funerals, etc) your supervisor as well as Lynda Closson in the Soil Science Office must be notified as soon as possible. Notification should be prior to time taken off or for sick time, given as soon as possible.

For any questions on office procedures, please contact:

Lynda Closson, Office / Graduate Assistant, Rm 362, (204) 474-8153

Jennifer Henderson, Office Assistant, Rm 362, (204) 474-8153

Terri Ramm, Office Administrator, Rm 366, (204) 474-6035