



QUEEN'S UNIVERSITY BIOLOGICAL STATION

QUBS USER GUIDELINES: *REGULAR USERS*

www.QUBS.ca
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QUEEN'S UNIVERSITY BIOLOGICAL STATION

USER GUIDE FOR 'REGULARS'

This User Guide outlines matters of safety, QUBS procedures and policy governing use of the field station. Users must read this guide and understand its provisions. This is not a trivial matter. All QUBS users must co-operate in ensuring a safe and productive facility. All users will be required to read and abide by the provisions of this guide.

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QUBS Website

This guide and general information is also available at www.qubs.ca

History

Queen's University Biological Station (QUBS) was established in 1945 when Dr. Wes Curran purchased the point on Lake Opinicon from the Acton family on behalf of the University. Some of the buildings on Queen's Point were erected in the period 1946-1948, notably the boathouse, Trilab and the "Bunkie Junior" cabins. Development has continued since that time, with a field station facility of some 30+ buildings - living accommodations, food service space, labs, library, aquarium, computing equipment etc. In spring 2000, the new Raleigh J. Robertson Biodiversity Centre was completed, replacing the old lodge as our central services building. The Jessie V. Deslauriers Center for Biology established in 2014 houses the Jack Hambleton library, Fowler Herbarium and three lab spaces. A number of property acquisitions have also taken place: Sheep Island (1950), Hughson Tract (1976), expansion of the main QUBS site by purchase from the Curtis family (1985), Skycroft Tract (1986), Eastern half of Cow Island (1988), Cape-Sauriol Environmental Studies Area (1989), Pangman Conservation Reserve (1994), Bracken Tract (1994), Moores Tract (1995), Crabbe Property (1999), Massassauga Road Property (2001-2003), Boston Wildlands (2004), Reid Property (2008), MacLean Place (2009), Bowen Property (2013), Jones Property (2013), Elbow Lake (2013), Hammond Property (2018) and Hughson Farm (2018). Presently, QUBS owns or co-owns over 3300 hectares (about 8,154 acres) of land. In addition, QUBS has an agreement property, the James H Fullard Nature Reserve (2010) and Warren Property (2022), with Rideau Waterway Land Trust and Nature Conservancy of Canada. With such a large land-base, QUBS properties form a significant conservation presence in the Rideau Lakes/Frontenac Axis area. QUBS properties are located in the Frontenac Arch Biosphere, a UNESCO World Biosphere Reserve, in addition due to the location on Opinicon Lake, it is part of the Rideau Canal, a UNESCO World Heritage site.

The Biological Station provides living and laboratory facilities close to field study sites for teaching and research in field biology. The QUBS mandate is to provide quality opportunities for teaching and research in biology and the environmental sciences. QUBS facilitates both teaching and research by providing the logistical support for these activities. Originally a teaching facility, QUBS has increased its research activities since the fifties. Both education and research are important mandates of QUBS. Currently, involvement with the Ontario Universities Program in Field Biology (www.oupfb.ca) and research programs of researchers from a wide variety of institutions makes QUBS a vital, interesting site for field biology. In addition, QUBS offers its own outreach programming in the form public events and currently hosts a variety of field trips and small conferences each year. In recent years, public outreach has become an important part of activities at the field station (Open House, Community Newsletter, seminars, website etc.), and specifically at our primary outreach campus at Elbow Lake Environmental Education Centre (www.elbowlakecentre.ca) which was established in 2011. Queen's University provides a portion of the financial support for the Biological Station and its operation, however revenue generation via user and outreach programming fees supports a significant portion of the QUBS operational costs.

In most years, researchers from many Canadian universities, as well as international researchers, conduct studies at QUBS. This diversity of users contributes to a healthy atmosphere of inquiry into a wide array of research topics.

Administration

QUBS is administered as part of the Faculty of Arts & Science, Queen's University. The cascade of responsibility for operations is as follows: Dean, Faculty of Arts and Science; QUBS Director, Dr. Stephen Lougheed; Associate Director, Dr. Shelley Arnott; QUBS Senior Manager, Sonia Nobrega; QUBS

Opinicon Operations & Stewardship Manager, Aaron Zolderdo, Elbow Lake Operations & Maintenance Coordinator, Adam Morcom. Staffing also includes Maintenance Assistant, Rod Green, Outreach & Teaching Coordinator, Emily Verhoek, Indigenous Knowledge-STEM Program Coordinator, Alice Johnston, and Kitchen Manager, Veronika Jaspers-Fayer. The Director and Managers are responsible for day-to-day operation of the facility and collaborate on planning, reservations and all aspects of general operation. Accounting is handled through Jan McGraa, Department Assistant, Department of Biology.

The Dean of Arts & Science and Director of QUBS are also advised by an established Advisory Committee.

Reservations

Research: QUBS is available to any researcher subject to limitations of space. The Director or Managers can provide a description of facilities, current fees and procedures. Each researcher must complete an Application for Lab Space and Accommodation and a QUBS Research Application (all pertinent info is available on the QUBS website; <https://www.qubs.ca/booking/applications>). An application for space must be submitted each year if researchers wish to reside onsite during their field season. Applications are typically requested by 1 April. On review of all applications, a preliminary space assignment is issued, along with estimated costs of the proposed research and an invoice for a first billing (deposit). Upon receipt of the deposit, a final allotment of space will be made. It is the responsibility of the supervising researcher to ensure that appropriate review committee approval has been met (e.g. animal care, ethics, field safety etc.).

Prior to arrival at QUBS Principal Investigators will be required to provide copies (for QUBS and Queen's Animal Care Committee) of animal care approvals and standard operating procedures approved by their home university and copies of necessary permits to carry out animal work at QUBS.

In addition, Queen's University Principal Investigators must file the appropriate documents relating to the Off-Campus Activity Safety Policy (OCASP). Under OCASP, QUBS is considered off-campus, so safety-planning records must be filed and approved before arrival at QUBS. OCASP info is available at <http://www.safety.queensu.ca/ocasp/ocasp2.htm>

Certain proposals may be inappropriate for QUBS because of safety considerations, biohazards, impacts on natural populations, conflict with established programs or space limitations. QUBS management reserves the right to refuse proposals that are deemed inappropriate for the site.

Teaching: Field courses are planned at the annual meeting of the Ontario Universities Program in Field Biology (OUPFB; www.oupfb.ca) in December. Proposals for OUPFB offerings should be sent to the Director or Managers in advance of this meeting. Proposals for field courses distinct from OUPFB modules should also be made to the Director or Senior Manager. These will be approved subject to space limitations. OCASP planning and approval is also required for field courses. Other teaching activities (e.g. field trips associated with university courses) should be approved by the Director or Senior Manager well in advance.

Conference Use: This type of use is negotiated with the Director or Senior Manager. Fees for summer conference use are listed in QUBS fee schedule (<https://qubs.ca/booking>). Fees for conferences at other times are assessed dependent upon facilities used, space and amenities required and number of participants.

Guests: Short-term visitors are welcome at QUBS. The Opinicon Operation & Stewardship Manager must be notified to ensure space availability and to facilitate records-keeping and billing. Details of guest use (meals) must be entered by the host on the visitor/guest sign in sheet in the Raleigh J. Robertson Biodiversity Centre.

Other Uses: Uses other than those outlined above may be permitted. Contact the Director or Senior Manager.

Arrival at QUBS

Immediately upon arrival at QUBS. A staff member (Operations or Senior Manager), will show you to accommodations/lab space/equipment allocated for your use. A copy of the QUBS User Guide is available on request. Familiarize yourself with the guide (on-line or paper version) and use it for reference during your stay. The Operation & Stewardship Manager will obtain personal data from each user (via an online User Form): name, affiliation, supervisor, emergency contact information, special medical conditions, allergies etc. In addition, he will review billing procedures for costs incurred during your stay. If required, he will also outline duties expected under a chores agreement.

Maps: GIS maps are available on the QUBS website. If you require a more detailed or specific mapped area, please contact QUBS staff.

Health and Safety: The foremost concern of QUBS staff is a healthy and safe living/working environment at the field station. QUBS users must abide by the safety guidelines outlined herein and assist staff with all health and safety matters. Fieldwork does entail some risk. QUBS users must be aware of these inherent risks and endeavour to make assistants and co-workers aware of risk factors. In conjunction with QUBS staff, plans must be put in place to minimize risks to field workers. Each lab must conduct a risk assessment session prior to fieldwork and develop a group-specific operations plan for safe fieldwork. The QUBS Opinicon Campus safety officer is the Operations & Stewardship Manager, Aaron Zolderdo. QUBS is serviced by the 911 emergency system. Dialing 911 gives access to fire, ambulance and police services.

If you call 911, you will need to report the municipal address for QUBS: QUBS Municipal Address: 280 Queen's University Road, Township of Rideau Lakes, South Crosby Ward (about 1 mile west of Chaffey's Lock off the Opinicon Road).

Emergency Fire Procedure

Upon detection of a fire, prime concern is for personal safety. Immediately evacuate the affected building. Proceed to nearest exit, shouting "FIRE, FIRE, FIRE". Make sure that everyone is out of the building. Ring the alarm bell outside the Raleigh J. Robertson Biodiversity Centre (hereafter the "Operations Centre") and continue ringing to alert all station users (the Operations Centre has automatic alarms in case of fire in that building). Call the local Fire Department immediately using 911, and notify QUBS management as soon as possible. Assemble in the open area immediately in front of the Operations Centre for head count and further instructions. Principal investigators should always know the whereabouts of their workers and should assist QUBS staff in accounting for everyone.

QUBS is provided with smoke detectors and fire extinguishers in all accommodations, and carbon monoxide detectors in major accommodations (i.e., cottages with gas/oil heating systems). The Operations Centre and Jessie V. Deslauriers Centre for Biology have hardwired fire alarm systems, equipped with emergency backup lightening and audible danger alarms. Familiarize yourself with the warning devices, extinguishers and exits in your living/workspace. However, it is not expected that QUBS users be firefighters. IF the fire is a minor one (a fire less than 1 m³) and IF you know

how to use a fire extinguisher and IF you have an exit at your back and IF you are sure you can extinguish the fire, then DO SO. If you have ANY doubts, commence emergency fire procedures as outlined above. Property can be replaced, lives cannot. DO NOT TAKE CHANCES. QUBS has a portable fire pump for firefighting and staff are trained in its use. This will be used when practicable to contain fires until the arrival of the local fire department. Fire Safety equipment is routinely inspected. However, if you should notice defects or missing equipment (i.e., your work/living space is missing a fire extinguisher), notify QUBS staff at once.

Fireplaces are present in several buildings at QUBS. However, only the woodstove in Keast Cottage and in the RJR Biodiversity Centre can be used. Treat all fires in fireplaces with extreme caution. NEVER leave a fire unattended. Outdoor fires may be permitted IF conditions are suitable. Outdoor fires will not be permitted under windy or dry conditions or when outdoor burning bans are in place or when such activity interferes with work/sleep schedules of QUBS residents. Please speak with QUBS management for access to designated outdoor fire pits and firewood.

Smoking: As part of the university's focus on fostering a culture of wellbeing at Queen's, smoking, vaping, and the use of tobacco products is banned from its Canadian campuses and properties as of June 1, 2019. At QUBS, there will be no smoking inside ANY building or property. For safety reasons, there will be no smoking in boats, station vehicles or in the vicinity of the boathouse and gas shed. Smoking must be done out-of-doors and off Queen's property. When smoking out-of-doors, be careful not to create a fire hazard in the woods. Do not dispose of butts on the grounds.

Meals

Meals are served buffet-style in the RJR BioDiversity Centre. Station users are expected to bus their own dishes to the racks beside the sinks. Normal meal hours are: Breakfast 07:30-08:30; Lunch 12:00-13:00; Dinner 17:30-18:30. The bell outside the Operations Centre will toll to announce the start of meal hours. Meals will not be served at other hours unless specified by QUBS management. On most Sundays, brunch is served. When scheduled, brunch will run from 10:00-13:00. Meals are prepared to provide a balanced, healthy diet. Normally, vegetarian meals are interspersed with the regular menu.

Alternatives to meats are generally available for strict vegetarians. In case of a food allergy or dietary restriction, the kitchen staff should be notified in advance. If an individual user requires or desires specialized foods, they must provide these on their own. For field researchers, a box lunch is available with 24 hr. notice. Kitchen and food storage areas are off-limits for QUBS users. Do not remove equipment from the kitchen. Do not help yourself to foodstuffs in fridges or freezers. Doing so will be viewed as petty theft with reprisals. Snacks will be placed on serving counter or out in the servery.

Coffee and tea are always available. For early risers, space will be designated for early breakfast food in an accessible special diets fridge (hereafter the "Birder Fridge"). Do not store/chill alcoholic beverages in the Birder Fridge. Keep food and beverage counters clean. Suggestions for menus are always welcome.

Drinking Water

Safe drinking water from a well is provided only to the Operations Centre, White House, and the Phelan Cottage. All other cottages and labs are supplied with untreated water (either directly from the lake or untested well). The well supply is tested all year round for contaminants. Lake water and untested well water is suitable for washing and showering, not for drinking. Blue jugs in the kitchens of cottages contain safe drinking water. Fill these at the Operations Centre or notify QUBS staff as

required.

Refuse Disposal

Water-borne disposal (toilets, sinks, showers) in living accommodations ends up in septic systems. These systems need to be treated gently. Do not dispose of non-biodegradable material in toilets (no plastic). Do not dispose of paper towels, cardboard or feminine hygiene products in toilets. Do not attempt to flush bulky items. No chemicals to be disposed of in sinks or toilets. Solid waste should be placed in appropriate containers (using clear plastic bags only). Animal material should not be placed with garbage - consult management re burial or alternate disposal. Take care to safely package material, which may pose a handling hazard (e.g. broken glass, razor blades, pipettes). Do not dispose of chemicals in garbage. A wide variety of materials is locally recyclable. QUBS actively participates in these programs and encourages all users to co-operate in this effort. A recycling shed is located near the workshop. Compost containers are found in the Operations Centre. Please deposit non-animal food scraps for composting. This is a good way to reduce the volume of waste destined for landfill sites and produces an ecologically valuable-end-product.

Chores

To defray costs of board, QUBS users can elect to perform a designated duty. This co-operation also helps us keep costs to a minimum by reducing labour costs. For a reduction in fees, expect a maximum of 5 hours per week in the performance of duties. Duties will be scheduled and assigned by the Operations & Stewardship Manager. Of necessity, most chores involve dishwashing and associated Operations Centre cleanup, though other duties are possible. Chores should not interfere with research, so various duties and schedules may be assigned to mesh with research time commitments. It is your responsibility to find a substitute if you are unable to perform duties on schedule. QUBS housekeeping staff attempt to keep common areas clean. However, housekeeping in individual accommodations and laboratories is the responsibility of the user. In multiple-user accommodations (e.g. Curran Cottage), a committee of users should co-operate in keeping common areas clean and tidy. In areas such as the White House which has general-use bathrooms and common areas, the residents have primary responsibility for housekeeping which is supplemented by QUBS staff as necessary. Simple things like removing outdoor footwear at entrances and mopping up spills as they happen will greatly assist with keeping QUBS buildings clean and tidy. In the Operations Centre, regulars should keep a pair of indoor shoes for use exclusively inside the building. In general, users will consistently assist with housekeeping by applying the rule of thumb: "Leave it at least as clean as you found it."

Swimming

Swimming areas at QUBS are unsupervised with is no lifeguard provided. Swimming is entirely at your own risk. Do not swim alone, after dark or while impaired. There are two swimming areas used at QUBS. Different levels of swimming ability are required for each area. Keast's Beach is good for children under adult supervision and for weak swimmers. Use of the beach area is sometimes restricted so as to not interfere with ongoing research projects on nesting fish. The diving board area, with its deep water, should only be used by competent swimmers. Safety equipment (throw rings and ropes) are placed by swimming areas. Do not remove or play with safety equipment. Be advised that the area off the diving board is a channel heavily used by boat traffic. It is dangerous to swim far out from shore or back and forth across this channel. There are inherent dangers in recreational swimming. *Be safe. Recognize the hazards.*

Boating

QUBS owns and maintains a fleet of boats. These are NOT for general use. Rather, they are leased to investigators as research tools. Boats are fundamental research tools to field researchers. In

addition, they are expensive tools and in inexperienced hands, very dangerous.

Research Use: When a boat is leased to a researcher, that boat is for exclusive use of that researcher and his/her assistants for the duration of the lease period. All users must have a *Pleasure Craft Operator Card*. QUBS requires this proof of competency of all motorboat users before permitting motorboat use. Before a boat is turned over to a researcher, a training session is required of all potential users. This session will ensure that users have a basic knowledge of boating safety, "rules of the road," minimum safety equipment required, operation of outboard motors, hazards, sign-out sheets and security arrangements. QUBS provides the minimum safety gear for QUBS boats. All outboard motor boats require, by law, a life jacket or approved personal flotation device for each passenger, a set of oars, an anchor with 15 metres of line, 15 metres of buoyant heaving line, a bailer or manual pump, a sound signaling device (whistle) and a watertight flashlight or 3 flares. Life jackets (PFDs) are provided inside the boathouse. A PFD must be worn at all times while operating a boat. Oars, bailing cans and safety kits are kept inside the lower level of the boathouse. Boat users must be certain that this minimum safety gear is present each time the boat is used. QUBS provides a lock and chain for each boat. Boats are to be kept locked when not in use. Locking prevents unauthorized use or theft of equipment. Each boat is identified by individual number and docking space. A sign-out sheet is also assigned for each boat. As a safety precaution, boats must be signed out each time they leave the dock. Lab members and QUBS staff will know who has the boat at any given time, where they went and when they expect to return. If, for any reason, the boat fails to return at the indicated time, a search can be initiated. Boats and motors are expensive research equipment. If your boat or motor needs servicing, notify management immediately. Tie boats securely at the dock so they cannot be damaged by contact with other boats, the dock itself or other equipment. Do not leave boats on shores subject to wave action - this will wear the hull. Keep speeds to reasonable levels. No racing or horseplay in boats. You are responsible for your actions as operator of a motor vehicle. You are also responsible for damage caused by the boat's wake. Keep an eye on weather conditions. It is dangerous to be out in small craft during windstorms, thunderstorms and during periods of cold air and water temperatures. A numbered gas tank is provided with each boat. NEVER SWITCH GAS TANKS. This will damage equipment. QUBS staff will fill your gas tank upon request. The cost of gasoline and oil are built into the rental boat rental fee. Use of boats may be denied, or revoked, to anyone operating a boat in an unsafe manner.

Recreational Use: QUBS canoes may be available for recreational use. Users must be familiar with boating safety and use of canoes. Canoes require the following basic safety equipment: a lifejacket for each person, paddles, 15 metres of buoyant heaving line, a bailer, and a sound-signaling device (whistle). Be sure that these are in the canoe each and every time it is used. Wear PFDs when using canoes. Canoes belonging to the station must be signed out, refer to the number on the side hull of the canoe for reference. Do not use private canoes without the permission of the owner. Always let someone know where you are going and when you expect to return. Outboard motor boats must not be used for recreational purposes without permission. Generally, QUBS outboard motor boats will not be available for recreational uses. In the event that a boat is made available for such uses via permission of QUBS management, proof of competency must be provided by the operator, as above.

Teaching Use: Special care must be taken when operating boats for teaching purposes. Operators must be trained in boat safety and operation and ideally possess the MEDA3 level certification and at minimum have a Pleasure Craft Operator's Card (maximum 6 passengers). New Transport Canada regulations class our pontoon boats as small commercial vessels and strict standards, including special safety requirements come into play for these boats. QUBS pontoon boats must not exceed 6 passengers under the Operator's Card, for greater than 6 but less than 12 passengers, the Small Vessel Operator Proficiency (SVOP) is required. Large craft with many passengers are difficult to handle and require practice and good judgment. When unskilled users are involved, QUBS staff will

pilot boats for teaching purposes. Operation of boats requires special caution. There are many hazards in Lake Opinicon, especially drowned lands and Rideau Canal traffic. Operators are responsible for their actions and the minimum safety equipment. Misuse, abuse or dangerous operation of any QUBS boat will not be permitted.

Accident or Injury

Principal investigators are responsible for ensuring safe working conditions for their graduate students and assistants. QUBS management MUST be notified immediately of ANY accident or injury sustained while on Queen's Property. QUBS Management can assist the Principal Investigator with accident reporting (Institutional and WSIB). First aid and transport for medical attention can also be arranged by the Managers. In serious instances, do not wait for the Managers, call an ambulance via 911 immediately. QUBS staff endeavour to provide a safe environment at the field station. QUBS staff will work with Principal Investigators to ensure safe working conditions. If users note deficiencies, hazards or unsafe conditions, report these at once to QUBS Management. Do not attempt repairs yourself. First aid equipment (including epi-pens) are provided in the Operations Centre. These are inspected regularly. However, if required items are used up or missing, notify QUBS Management. Even small injuries benefit from prompt attention. Many QUBS users may have qualifications in first aid, CPR, lifesaving or other skills. Please advise QUBS Management of special training you have.

Laboratory and Field Safety Projects: QUBS management is concerned that all projects be carried out with appropriate safeguards. There are risks in laboratory and fieldwork. It is imperative that risks be assessed, that everyone affected be made aware of these risks and that everything possible be done to minimize these risks. Under the Off-Campus Activity Safety Policy (OCASP), Queen's-based Principal Investigators must develop a group-specific risk assessment and field operations plan, which governs field activities of the group with safety of all in mind. This plan must be approved by the Chair of their respective Departments and a copy should be filed at QUBS. Principal Investigators must work with QUBS staff to ensure that a safe working environment is maintained at QUBS. QUBS activities must conform to the Off-Campus Activity Safety Policy of Queen's University:

<http://www.safety.queensu.ca/ocasp/>. Radioisotopes and any genetically-modified organisms (GMOs) are inappropriate for research at QUBS. These may not be used in projects without an extensive review and approval process. Proposals involving work with hazardous chemicals must be reviewed with the Director or Management. Provisions must be made to ensure that appropriate safety data accompanies every chemical brought to QUBS. Material Safety Data Sheets (MSDS) are available on-line for all chemicals, and users should be familiar with how to access this information. Provision must also be made for disposal of waste chemicals. No chemical disposal will be allowed by dilution, flushing down drains or dumping on site. Principal Investigators will consult with QUBS Management to discuss details of chemical lists, labeling, MSDSs, storage on site and disposal.

Training & Safety Equipment: It is the responsibility of the Principal Investigator to ensure that his graduate students and assistants are trained in laboratory safety and receive Workplace Hazardous Materials Information System (WHMIS) training when working with chemicals or biohazards. Furthermore, it is the responsibility of the Principal Investigator to ensure that they and their workers are provided with laboratory (e.g. protective clothing and equipment) and field safety equipment appropriate to the work. Eyewash stations are provided in QUBS labs and inspected regularly.

Chemical Storage: Researchers must only bring the minimum necessary to QUBS. Each lab must maintain a list of all chemicals on-site. At the end of season, remaining chemicals must be removed back to the home university/lab. No chemical will be present in open labs in containers exceeding 1 litre in size. No chemical will be present in flammables cabinet in volume exceeding 4 litres. Flammable chemicals must be stored in the yellow flammables cabinet inside the lower Brown Lab.

No flammable chemicals will be stored in regular refrigerators because of the risk of explosion. Refrigerators and freezers must be identified as chemical storage or food and beverage storage, not both. Do not store incompatible chemicals side by side.

Disposal: Wide-mouth disposal containers are available for liquid chemical disposal. QUBS Management will arrange to have these picked up and taken to Queen's Health & Safety for disposal. Hazardous waste must be clearly identified as to contents and Principal Investigator.

Workshop

Over time, QUBS has built and equipped a workshop with wood- and metalworking tools. Use of the workshop is available to all QUBS users. All users must be trained by QUBS staff in proper and safe use of shop equipment. A training session will include functions of equipment, safe use, safeguards, protective safety equipment etc. Shop projects must be discussed with QUBS staff in advance. This will allow scheduling of necessary training, minimize conflicts of equipment use and enable fair access. In addition, QUBS staff have considerable shop skills, which will benefit most shop users. Time-permitting, QUBS staff may be available to undertake projects on behalf of researchers. Tools may be borrowed from the workshop for short periods of time. All tools must be signed out and returned promptly. For routine work with common hand tools, a tool cabinet, stocked with simple tools, is available outside of the garage beside the front entrance doorway. Workshop equipment can be extremely dangerous. Untrained users will not be allowed to operate equipment. Protective safety gear must be worn. The workshop will normally be locked unless QUBS staff are at hand.

Mail

The correct mailing address for QUBS is:

Queen's University Biological Station
280 Queen's University Road
RR # 1 Elgin, Ontario K0G 1E0.

Mail is normally collected from the mailbox on a daily basis and made accessible in the RJR Biodiversity Centre. Mail received is placed by order of last name on the back counter inbox located in the servery beside the milk cooler. Outgoing mail can be dropped off at the mail boxes in Chaffey's Lock, or at the Canada Post office in Elgin.

Telephones

The main line connects to phones in the Biodiversity Centre. These phones are primarily for business calls and for incoming calls. These telephones are programmed for local calling only. Users are not allowed to use the station phone for personal calls, unless prearranged with QUBS Management.

The main number at QUBS is: (613) 359-5629.

Anyone answering phones is expected to assist the caller in locating the person called or in taking a decipherable message. Messages should be posted on the bulletin board in the lodge.

E-mail /Internet Access

Our local area network (LAN) in the Operations Centre links all of the computers on site. This LAN at QUBS is linked to the outside world via a broadband wireless link. Furthermore, the Operations Centre, Brown Lab, Library, Whitehouse, and Phelan Cottage are served by a wireless link to the

LAN. E-mail and internet can thus be accessed through computers in the computer room of the Operations Centre or by using your own computer linked to the LAN by cable or wireless (User name: guest; Password: Biostation).

Fees

Fee schedules for the year are printed in the Annual Report and Newsletter (and are available on QUBS website). A summary is posted on the notice board in the lodge. Most fees are based on the user-pay principle. A detailed description and breakdown of fees can be found on the QUBS website,

Basic Services

Fundamental services (water supply, septic systems, electrical supply, heat, telephones, wifi, etc.) are the direct responsibility of QUBS management. Point out problems or concerns as they arise. Do not attempt repairs yourself. Be advised that many of these services are buried. Do not drive stakes/posts/poles or excavate without consulting QUBS management. As QUBS is trying to become as 'green' as possible, users should try to conserve energy by minimizing use of basic services. Do not waste water, electricity or heat.

Alcoholic Beverages/Drugs

Queen's University and Ministry of Labour regulations prohibit alcoholic beverages in workspaces (Operations Centre, workshop, aquarium or labs). However, alcoholic beverages are permitted in individual residences. Keep bottles and cans out of plain sight. Even a few empties in plain view give the wrong impression to visitors to QUBS. There is zero tolerance for illegal drugs at QUBS or on QUBS properties. Smoking or vaping of cannabis is prohibited on the Queen's University campus, unless approved for medical or research use, as per the university's Interim Smoking of Cannabis Policy and existing Queen's policies about Smoking on Campus. It is expected that QUBS users will behave in a sensible and decorous manner at all times.

Road

The access road into QUBS is narrow, winding and has several blind corners. QUBS users must use extreme caution when using this road. The access road into QUBS is available only through a restrictive lease agreement. Speed limit signs must be obeyed. Violations of these conditions could mean loss of access. The volume of traffic by QUBS users dictates that special caution be exercised in using the roads of the field station. Children, walkers, runners and bicyclists share these roadways. Near buildings, slow speeds will reduce the amount of dust created and minimize hazards. Operate all vehicles with utmost care.

Parking

To maintain access to all buildings for users, maintenance vehicles and emergency vehicles, vehicles should not block roadways, ramps, driveways or access to any building. Most vehicles should be parked in the lots next to the workshop. If engaged in early morning or late night research work, please park vehicles as far away from residences as possible. Cottage dwellers may park near their residences on provision that doing so will not block direct access. No parking anywhere on the loop down to the boathouse. Stopping to load or unload equipment is permitted. After these operations are completed, the vehicle must be removed to a designated parking area.

Co-operation Among Users

All QUBS users should respect the need for integrity of research projects and make every effort not to disturb other research efforts. In addition, every QUBS user has the right to privacy and non-disturbance. Be aware that not all users operate by the same schedule. Do not disturb others trying to sleep. Immediately cease disruptive activities upon peer request or when directed by QUBS staff.

Research/teaching activities always have priority over recreational ones.

Pets

No pets are permitted at QUBS.

Seminars

There is a Wednesday evening seminars-series offered from May through August from 19:00 to 20:00.

Principal Investigator and General Meetings

On occasion QUBS may hold meetings to allow discussion of policy and operation of QUBS. Input from major users may be sought by email as well. Also from time to time, QUBS may hold general user meetings to discuss plans for events, policy, procedures, and to receive feedback from users.

Visiting Scientist

On occasion we may have financial means to support a visiting scientist (e.g. via the J. Allen Keast Field Biology International Exchange Fund for Australian Scientists). Intended to bring an established researcher, who might not otherwise spend much time at QUBS, to the field station, the program adds an extra dimension to life at QUBS. The Visiting Scientist will be expected to offer seminars on their research and directly interact with QUBS users throughout his/her stay.

Open House/Community Newsletter

Each summer, QUBS hosts an Open House day and distributes a Community Newsletter. These efforts are directed at promoting a greater interaction and understanding between QUBS users and the local community. Users are expected to co-operate in these valuable programs. The Open House is usually held on the last Sunday in June and open to the public from 1200-1500 hrs. Researchers should prepare a display of projects and/or assist with tours. The Newsletter is prepared in consultation with researchers and distributed to households throughout the area, providing contact with those unable to attend the Open House.

Annual Report and Newsletter

QUBS staff prepare this report to document research and teaching activities. It is distributed to Queen's administration, QUBS users and supporters (also available on QUBS website). The report provides a valuable reference to past projects, personnel and publications. In addition, the newsletter portion outlines major events at QUBS each year, including acquisitions, improvements, significant events in the personal lives of users and trends in use. Each researcher is invited to provide material for inclusion in the report. A brief summary of research, the project or thesis title, supervisor (if applicable), list of assistants and list of publications resulting from this work should be submitted.

Website

The QUBS website has a variety of resources for users including species lists, species accounts, blog spots, data archives, maps.

Public Relations

Research and teaching activities take QUBS users to many parts of the lake and surrounding areas. User activity is often conspicuous and generates curiosity in observers. In the field, you are seen as a representative of the university, QUBS and researchers/teachers in general. Be certain that your observable behaviour in the field is beyond reproach. Make sure that you acquire proper permits for work, ask permission for access to private property and are courteous and careful in field

operations. Always remove research paraphernalia from study sites after completion of a study (especially flags, markers). Be prepared to respond politely to queries from curious observers. Encourage keen locals to attend the Open House, weekly seminars or outreach events. The position of the field station in the community and its ultimate survival as a productive research/teaching environment depends on a good working relationship with local individuals and interests.

Harassment/Discrimination

Queen's University has a comprehensive policy and process for dealing with complaints of harassment and discrimination. This includes sexual harassment, physical or emotional harassment, discrimination on the basis of sex, race, visible minority or religion and conduct that interferes with your dignity or privacy. Contact the Director or Management for further information concerning harassment/complaint procedures or see:

<https://www.queensu.ca/secretariat/policies/senate/harassmentdiscrimination-complaint-policy-and-procedure>

Weapons Policy

In the interest of safety, Queen's University does not normally permit weapons on campus. This same stricture applies to QUBS and its properties. See www.queensu.ca/security/news/weappol.html for full details.

Research Properties

QUBS owns extensive tracts of land, which are available for a variety of research/teaching purposes. Particular needs should be discussed with QUBS management.

Equipment

GPS/GIS: QUBS owns two Trimble GPS backpack units with submetre accuracy and real-time correction capability. In addition, two hand - held units are available. This equipment can be made available for use in teaching and research programs. QUBS also has a depth recorder, which can be coupled with the GPS units. Available software enables production of detailed maps on site. Contact QUBS management to discuss use of this equipment. QUBS is developing a GIS archive which will store available information about QUBS properties and neighbouring lands. The system uses AutoCad Map, ArcView and ArcInfo platforms and is housed in the lower Operations Centre. Contact QUBS management for further details and access.

AudioVisual Equipment: QUBS has a data projector and laptop for presentations. A flat-screen monitor is installed in the Operations Centre foyer for information purposes. Contact QUBS management for details.

All-Terrain Vehicle (ATV): QUBS has two ATVs for occasional use by researchers; some researchers also have ATVs. These vehicles are intended to permit access to remote sites, especially when a large amount of equipment is required. These ATVs are not toys and are not for recreational use. Use of an ATV requires special training and careful handling. QUBS staff will provide a general use and safe operation tutorial, and users will have to pass a test based on safety materials obtained from the 4H clubs or equivalent. Helmets must be worn at all times. Joyriding, racing or handling the machine in a dangerous manner is prohibited. Care must be taken not to damage trails, paths or shorelines when in use. Operation of an ATV must not conflict with other research uses of QUBS properties. Contact QUBS staff for access to an ATV and to schedule training/testing sessions before use.

Aquariums: A variety of tanks for holding fish or for experimentation or observation is available at QUBS. Tanks can be supplied with lake or well water, warm or cold water, and oxygen (air). Individual experimental rooms can be assigned. Discuss needs with QUBS management.

Library Materials: The Jack Hambleton Library provides quiet study space, basic reference materials, field guides, and some runs of journals. QUBS has a reasonably complete collection of theses resulting from fieldwork at the field station. Library materials are not to leave the building.

Weather Stations: We have a network of satellite-linked climate stations at QUBS. Inputs are recorded for air, soil and water temperatures, relative humidity, rainfall, windspeed, wind direction, solar radiation, and barometric pressure. Data are available on-line and from our data archive. See QUBS management for details.

Computers: For general use, several PC's and a networked printer/photocopier is available. QUBS users can gain access to the internet/network at QUBS or can link a computer to the local area network at QUBS - see staff for details. ArcGIS is installed on a dual-processor computer in the Operations Centre. Check with QUBS staff for access to this machine. Some software is available for general use. Consult with QUBS staff to determine what is available. You will need to provide your own data storage.

Storage Building: There is storage for extraneous lab gear when not in use. Small equipment must be containerized and labeled before storing. The storage building is kept locked - see QUBS staff for access. Storage plans must be made with QUBS Management if lab gear/equipment is to be stored at QUBS long-term. If equipment/gear are left without notice it may be disposed of or re-purposed for others to use. All lab gear/equipment must be labeled with who they belong to (full name, affiliation, supervisor) prior to storage.

Insect Collection: In the collections room(s) of the Jessier V. Deslauriers Centre for Biology, QUBS has a basic reference collection of local insects. Researchers interested in using or contributing to the collection should contact QUBS staff.

Herbarium: As of 2014 the Fowler Herbarium is part of QUBS. With over 140,000 specimens it provides a wonderful resource for teaching and research. For access please consult QUBS Senior Manager or the Opinicon Operations & Stewardship Manager

Photocopier: A photocopier is available in the common lower floor area of the Operations Centre. Record the number of copies produced in the logbook. You will be billed for each copy. Photocopying is subject to HST.

Specimen Freezers: For storage of frozen specimens, two freezers are available. Both are located in the basement of the White House. Consult with QUBS management concerning use of these freezers. Do not use for storing foodstuffs. Storage plans must be made with QUBS Management if specimens/samples are to be stored at QUBS long-term. If specimens/samples are left without notice they may be disposed of without warning. Always label specimens/samples with who they belong to (full name, affiliation, supervisor).

Liquid Nitrogen Dewars: Two Dewar units are available for ultracold storage of specimens. A 21 litre container with 9 small containers is available for field use, short - term storage and transportation. A 47 litre container with 6 large containers is available for long - term storage. Principal investigators

using Dewars will be charged for the liquid nitrogen used to fill these containers. For use of Dewars, contact QUBS management.

Optical Equipment: QUBS has a few microscopes available for use on-site use. Presently, we have four compound microscopes (light microscopy capability), 10 dissecting microscopes and one quality teaching-head dissecting microscope. In addition, a dissecting 'scope and a compound 'scope are available which are fitted with cameras for teaching and research purposes. We also have a microscope - mount digital camera, which can be linked to a computer for research or teaching purposes. Also available are binoculars and a spotting scope and tripod. Access to this optical equipment is via QUBS staff.

Balances: There is a general-use weighing station in the White House basement lab. A Mettler AE100 electronic pan balance (accuracy to 0.1 mg) is installed atop a marble slab weigh table. Also available is an Ohaus C305 electronic top-loading balance (accuracy to 0.1 g). The former is a precision balance, requiring special care during use. The latter is more durable and should be used for wet weights of specimens etc.

Other Equipment: Limited collecting equipment, sound recording equipment, fish nets and traps, insect nets, chest waders etc. are also available by contacting QUBS staff.

Washer/Dryer: Coin-operated machines are located in the laundry room of the Operations Centre.

EMERGENCY NUMBERS FOR QUBS USERS

QUBS IS SERVICED BY THE

911 system

(Fire Department, Police and Ambulance)

QUBS IS LOCATED AT 280 QUEEN'S UNIVERSITY ROAD,
TOWNSHIP OF RIDEAU LAKES, SOUTH CROSBY WARD

Emergency services can also be reached at:

ELGIN FIRE DEPARTMENT

613-359-5373

AMBULANCE

613-359-5390

ONTARIO PROVINCIAL POLICE

1-888-310-1122

Ontario Provincial Police (Elgin)

613-359-9911 (inquiries - office hours only)

POISON INFORMATION CENTRE

1-800-267-1373

EMERGENCY REPORT CENTRE (Queen's Campus)

613-533-6111

Hydro One (Emergencies and Outages)

1-800-434-1235