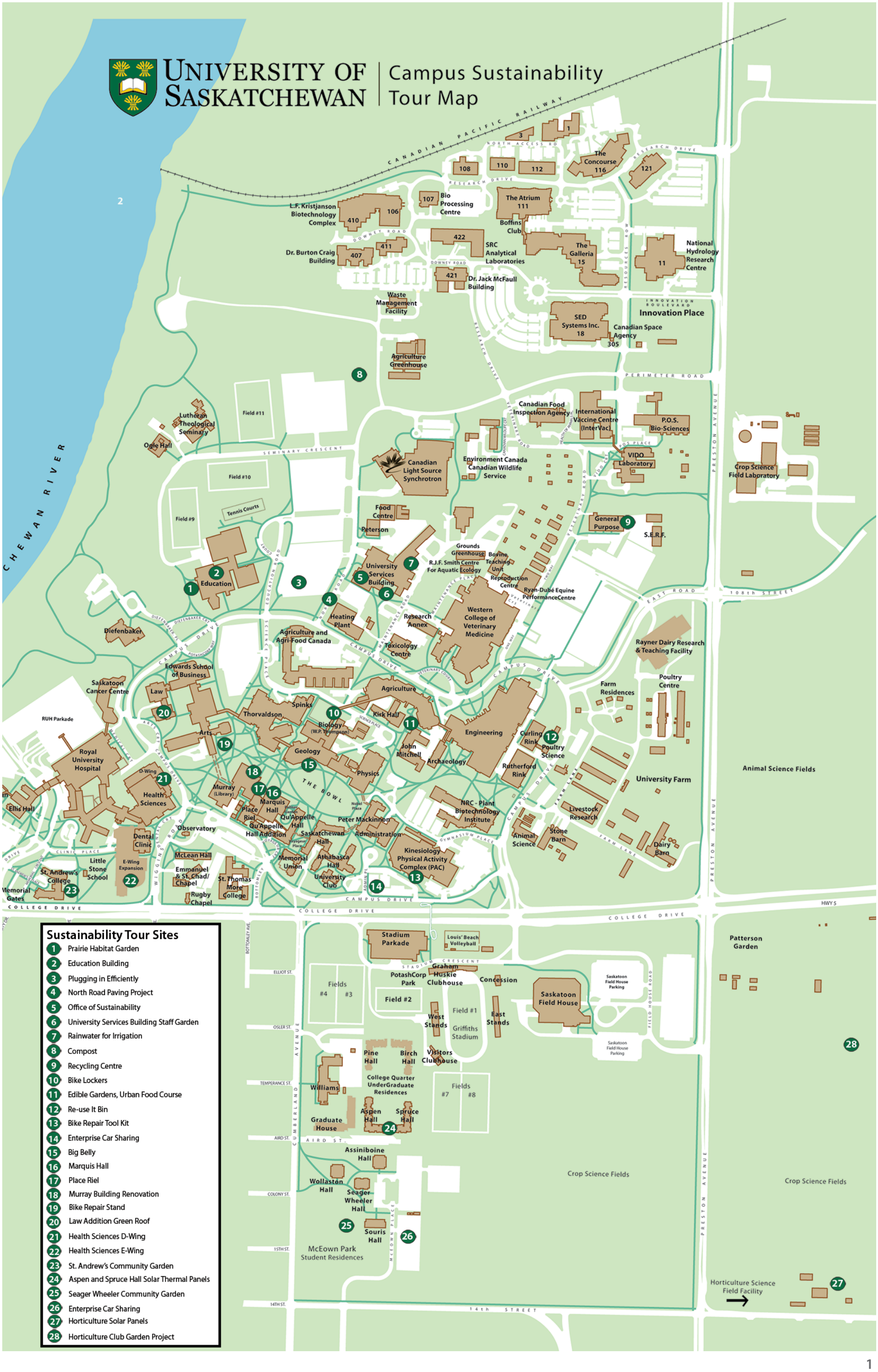
University of Saskatchewan | Campus Sustainability Tour Map



Sustainability Tour Sites

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CAMPUS SUSTAINABILITY TOUR

A lot is happening across our campus to "green" it and adopt more sustainable practices. Take the Campus Sustainability Tour, on foot or by bike. Do it all at once or visit the locations a few at a time.

1 **Prairie Habitat Garden**
The College of Education's Prairie Habitat Garden is designed to be a source of education by offering students a chance to see prairie plants in a natural setting. The garden also aims to increase the understanding of Saskatchewan's cultural heritage through the incorporation of First Nations' perspectives in the design elements of the garden.

2 **Education Building**
The Education Building has been used as a testing ground for a number of sustainability pilot projects including:

- Replacing 63 toilets with dual-flush, low-flow toilets and retro-fitting 7 urinals with a sensor system. These two projects conserve 30,000 litres of water per day.
- Installing variable frequency drives (VFDs) to control the heating, ventilation, and air conditioning motor system. By allowing large motors to operate at a range of speeds instead of continuously operating at full speed the VFDs save a substantial amount of energy and about $15,000 to $20,000 annually.
- Operating as a living lab. A 4th-year mechanical engineering project determined that with minor modifications to the building's ventilation system five once-through water-chilled units in the building (used to provide extra cooling for some spaces) could be eliminated. The small capital investment for the project would yield enough water savings to recover the cost in about one year.

3 **Plugging in Efficiently**
Since 2008, Parking and Transportation Services has installed approximately 1600 parking lot controllers on campus. A parking lot controller is similar to a standard outdoor electrical outlet, except it regulates electricity flowing to the outlet based on outdoor temperatures. So far audits show a 46% savings on the energy costs associated with plugging in cars on campus during winter.

4 **North Road Paving Project**
The North Road was reconstructed using sustainable construction methods including the use of salvaged road rubble, crushed concrete, glass, and porcelain to produce a green and durable product. Asphalt in one section was applied using a less energy-intensive cold process, while permeable pavement, which allows stormwater to infiltrate through the pavement to significantly reduce water runoff, was applied to another section.

5 **Office of Sustainability**
The University of Saskatchewan's Office of Sustainability works on sustainability-related opportunities and challenges on campus. Their primary mission is to build a sustainable campus through community engagement and collaborative action. They also offer the opportunity to link student learning with campus operations by providing hands-on, real-world learning opportunities, using the U of S campus as a "living lab".

6 **University Services Building Staff Garden**
Established the summer of 2014, this small community garden provides staff members of the University Services Building with an opportunity to grow vegetables. Future plans for the garden include adding an irrigation system for a more plentiful harvest.

7 **Rainwater for Irrigation**
Using a massive 4,500 litre tank, rainwater is collected from the roof of the University Services Building. Water is then transferred to a water truck and is used on landscaped areas around campus.

8 **Compost**
The university diverts more than 550 tonnes of organic waste from the landfill each year through composting of grounds waste in windrows. By composting more than 90% of campus leaves and grass clippings, the university saves $15,000 annually by not sending truckloads of this "waste" to the landfill. This past year the university has also begun to compost coffee grinds and is exploring options to begin composting campus food waste.

9 **Recycling Centre and Campus Recycling Program**
The Recycling Centre is the hub of the Campus Recycling Program and plays an essential role in the university's goal to divert 90% of campus waste from the landfill. The Program accepts all clean single-stream recycling materials, beverage containers, empty toner and ink cartridges, as well as batteries and cell phones.

10 **Bike Lockers**
The university has 19 bike lockers conveniently located on a demand basis throughout campus. The lockers are made from 100% recycled black plastic except doors and hardware, and come with a locking mechanism and padlock. The cost of the bike lockers are $20/month, $60/4 months, $90/6 months, $150/12 months. Rental is arranged through Parking & Transportation Services.

11 **Edible Gardens**
In 2012, the College of Agriculture and Bioresources marked its 100th anniversary by planting a garden of domestic fruit crops to demonstrate the potential for landscaping with fruit trees to support sustainable local food production and food security. Plant varieties include dwarf sour cherry cultivars, grafted apple trees, haskap, grapes, and raspberries.

Urban Food Production Course
This multi-disciplinary course introduces students to the concept of producing food in an urban setting and takes an in-depth look at our evolving food system. In addition to learning how to grow fruits and vegetables, students learn about the nutritional aspects, storage requirements and utilization of crops. Topics include urban livestock, aquaculture, apiculture, rooftop gardening, hobby greenhouse production, and environment modification.

12 **Re-use It Bin**
Located in a large green Loraas bin, reusable construction material that has been left over from construction and renovation projects on campus is available here for free. The bin often contains drywall, wood, ceiling tiles, and good quality used furniture. Materials are available to everyone on a first-come, first-served basis. This one measure is helping the university to meet its goal to reduce construction waste by 50%.

13 **Bike Repair Tool Kit**
With a valid student card, bike tool kits and supplies can be rented from the Physical Activity Complex Equipment Room during PAC hours.

14 **Enterprise Car Sharing**
Enterprise Car Share is a membership-based car sharing program for people who are looking for a cost-effective and environmentally friendly transportation option that's available 24/7. Car sharing can help reduce the total number of cars on the road which helps contribute to a cleaner, greener environment. This is one of two cars on campus. See also #26 on the map.

15 **Big Belly**
The Big Belly Solar Compactor uses solar power as its sole energy source to compact the trash and beverage containers collected in its two bins. The Big Belly can hold five times more than a non-compacting bin of an equal volume. This reduces fuel, labour, and maintenance costs associated with collection.

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16 Marquis Hall
Dining Services and Marquis Hall are always improving the sustainability of their operations. Initiatives to date include:

- The removal of food trays now saves the 2,000-4,000 litres of hot water that was used daily for washing the trays. The elimination of trays has also cut food waste substantially.
- Acting on recommendations from a student project coordinated by the Office of Sustainability, the large water-cooled refrigerators in Marquis were replaced to save 50,000 litres of water per day.
- Dining services now serves only 100% cage-free eggs.
- Harmful styrofoam containers have been replaced with biodegradable take-out containers.
- Whenever possible, ingredients are purchased from local suppliers.
- Fair trade coffee is served at all non-branded coffee outlets.
- Discounts are provided for those who use a re-usable mug.

17 Place Riel
For the Place Riel Renovation and Expansion Project, the design team strived to make the project as environmentally sustainable as possible. Green building initiatives used in the design include: implementation of an energy efficient mechanical system and building envelope, installation of eco-friendly lighting, removal of electricity-dependent escalators, use of low volatile organic compound paints, and building features made from recycled materials. After undergoing the major renovations, Place Riel received a LEED Silver certification.

18 Murray Building Renovation
After undergoing major renovations, the green features in the Murray Building's University Learning Commons now include water-saving flush valves on toilets and water-efficient urinals, daylight sensors and dimmable fluorescent ballasts that adjust lighting levels according to the amount of natural light present, and demountable wall partitions used in place of drywall to eliminate the waste associated with future office reconfigurations. During the renovations 75% of construction waste was diverted from the landfill, for example 300 light fixtures were reused in campus retro-fitting programs. This project is seeking a LEED Silver certification.

19 Bike Repair Stand
The USSU along with the Office of Sustainability has installed a Dero Fixit bike repair stand outdoors between the Arts Tower and Thorvaldson building. This repair stand is equipped with a manual air pump and an assortment of screwdrivers, wrenches and Allen keys for students to do their own minor bike repairs for free.

20 Law Addition Green Roof
The college's expansion was the second project in the province to meet the requirements for LEED Gold certification, and the first on the university campus to be LEED certified. The two living roofs that cover 60% of the building are among the building's green feature. These green rooftops reduce water runoff while lowering winter heating and summer cooling costs by acting as an insulator in the winter and diverting direct solar heat in the summer. The green rooftop is also expected to extend the life of the roof to 50 years compared to a conventional roof which is typically 20-25 years.

21 Health Sciences D-Wing
The two recent additions to the Academic Health Sciences Building were constructed with sustainability in mind and have the following green features:

- salvaged stone incorporated into the new building veneer
- a high quality and durable building envelope
- reflective and living roofs
- a high percentage of local and regional materials
- heat reclamation to conserve energy on exhaust air.

D-Wing expects to receive a LEED Silver certification.

22 Health Sciences E-Wing

- a prairie pond to collect and manage stormwater runoff
- low- and ultra-low flow plumbing fixtures
- solar collectors to supply up to 80% of the building's domestic hot water
- occupancy sensors to automatically reduce ventilation in unoccupied areas
- occupancy sensors to turn lighting off when spaces are unoccupied
- daylight sensors in the atrium and library to reduce lighting when natural lighting is sufficient

E-Wing expects to receive a LEED Gold certification.

23 St. Andrew's Community Garden
With St. Andrew's generous contribution of space, the Aboriginal Students' Centre and USSU established this community garden in 2013. Community garden members share the responsibilities of planting, tending, and harvesting the garden.

24 Aspen and Spruce Hall Solar Panels
Solar thermal panels have been installed at the Aspen Hall and Spruce Hall residences in College Quarter. The panels contribute 25% of the energy required to produce hot water in the halls. Due to the success of these solar thermal panels, additional panels will be considered for other university residence buildings.

25 Seager Wheeler Community Garden
The Seager Wheeler residence houses students and their families year-round. Through the implementation of a community garden, the residents have been given the opportunity to grow their own food and build relationships with their neighbours.

26 Enterprise Car Sharing
Enterprise Car Share is a membership-based car sharing program for people who are looking for a cost-effective and environmentally friendly transportation option that's available 24/7. Car sharing can help reduce the total number of cars on the road which helps contribute to a cleaner, greener environment. This is one of two cars on campus. See also #14 on the map.

27 Horticulture Solar Panels
The installation of a 24-kilowatt solar panel system at the Horticulture Science Field Facility is one step in reducing the university's greenhouse gas emissions. The solar panels provide nearly 70% of the yearly power needs of the horticulture facility.

28 Horticulture Club Garden Project
The U of S Horticulture Club is open to all students on campus. The Club maintains a vegetable garden each year which requires members to start transplants in the greenhouse, perform field seeding, weed the plot, and then harvest and store the produce. In high yield seasons the club has donated excess produce to local charities.

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