

## Lake Sundance Fun Facts

Did you know this?

### **Lake Facts:**

- Lake Sundance was constructed in 1980 and consists of a 33 acre (13.2 hectare) manmade lake and a 22 acre (8.9 hectare) park.
- As the lake is manmade there is no inlet or outlet stream with no chance of emigration or immigration of fishes.
- The lake has become more eutrophic over the years with an increase in nutrients coming from both man made fertilizers from lawn run off and also birds such as Canada Geese.
- There is open water fishing for about 7-8 months (April – November) of the year and ice fishing for approximately 2 months (January – Feb) of the year.
- Ice came off the lake on:
  - April 30, 2009
  - April 7, 2010
  - April 23, 2013
  - April 24, 2014
  - March 31, 2015
  - March 28, 2016
  - April 20, 2017
  - May 1, 2018
- The lake froze over on:
  - November 19, 2010
  - November 16, 2011
  - November 15, 2012
  - November 14, 2014
  - November 26, 2016
  - November 7, 2017
  - November 19, 2018
- Lake Sundance has an average depth of about 22 feet or 6.7 meters and has no natural inflow or outflow or natural springs. Please see the last page for the Bathymetric Survey of the lake that was done in the summer of 2018.
- Lake Sundance water level is impacted by both evaporation and precipitation and in a typical year we lose more water (up to 50,700 m<sup>3</sup>/year) than we get from rain and snow.
- Prior to 2011 we topped up the lake with City water at considerable expense (water cost at Oct 2018 was \$1.41/m<sup>3</sup>). In 2011 we drilled a ground water well and found 15 gal/min at 162 feet into the sandstone Paskapoo Formation. This well paid for itself in water savings in about 3 years and continues to be a source of water.
- Upon review by the board we noted that this well was not meeting all of the needs and we were still relying on City water at times. As water costs continue to increase the board voted to drill a second well. This well was drilled in 2018 and found a zone from 228-275 feet with the Paskapoo Formation, capable of 55 gal/min and is awaiting licensing by the province. One on production, this additional well will help fully supply our lake with water and save significant money for residents, as well as the added environmental benefit of not withdrawing water from the Bow River.

- Summer activities on the lake include boating, swimming and fishing. Winter activities include skating, fishing and cross country skiing.
- Off lake activities include skating and tobogganing in the winter and beach activities, playground activities, tennis, basketball, road hockey and picnics in the summer.
- The volume of water in this lake would be approximately 800,000 m<sup>3</sup> to 830,000 m<sup>3</sup> depending upon the water level and time of year.
- Currently we have rainbow trout stocked with a household limit as updated on <http://www.lakesundance.org/lake-rules.html> as well as brown trout, brook trout and grass carp which are all catch and release.
- There are illegally introduced yellow perch in the lake which have stunted due to over population. As these perch out compete our stocked trout for natural food we strongly encourage everyone to catch as many as possible. All caught perch must be killed. Brown trout and brook trout will eat small perch whereas rainbow trout will not. Grass carp feed on the aquatic plants in the lake.
- Lake Sundance has our own Zamboni. When filled with water it is very heavy and requires 14 inches of ice to safely run on the lake.
- In 2018, the staff put up 895 strings of Christmas lights on a total of 244 trees, for a total of 66,140 bulbs!! Wow!

### **Safety:**

- Most years the lake experiences early winter (December/January) formation of holes until the ice is about 10 inches thick. Current explanation of what causes holes is due to excessive snow weight pushing the ice down. When an air temperature change occurs sometimes the ice cracks and water flows up to equalize the pressure of the snow weight. In turn the snow acts like a sponge and increases the weight on the ice thereby making this flooding event worse. The water flowing up the crack wears down the ice like running an ice cube under a tap and can in turn cause a hole to form as large as 50 feet across within 24 hours. Signs of cracking can be slush under the snow hiding a hole however not necessarily signs of a hole serious enough to harm a person. Lake staff routinely monitor for holes however if you see any holes or notice slush on the ice please report it to the office. Stay away from any holes and slush until checked by staff and current protocol will be employed as needed such as cordoning off the area or closing the lake if necessary. The most important priority to residents is the safety of all adults and children. Going on the ice when closed will be reported to the Fire Department and perpetrators may be fined.
- Safety guidelines for ice thickness must take into account people that are unfamiliar with common sense ice safety. Our guidelines follow the Canadian Red Cross <http://www.redcross.ca/training-and-certification/swimming-and-water-safety-tips-and-resources/swimming-boating-and-water-safety-tips/ice-safety> which outlines 8 inches or thicker as the safe point for multi person ice use. Impacts of going to 6 inches means reduced safety margin for thin ice events as well as multiple people walking or skating together. Water underneath ice is always a constant 4 degrees Celsius and snow is a great insulator preventing ice from not forming as quickly under it. If someone falls in first call 911 for help as well as the office 403-256-4728. Thin ice is a risk for the rescuer also.

### **Community Facts:**

- Lake Sundance falls within the Sundance Lake Community boundary sandwiched on the west by MacLeod Trail and the east by Fish Creek Provincial Park. The north boundary is Midnapore community and the south is highway 22 X.

- Lake Sundance sits at an elevation of 3411 ft above sea level and the coordinates at the center of the lake is approximately 50° 54 ' 05.74" N by 114° 02' 2.30" W (Google Earth, 2007).
- The climate is considered temperate Zone 4A with an average of 112 frost free days per year and the air temperature has a direct impact on both lake productivity and oxygen levels. Annual average of 419 mm of rain helps with gardening however thunderstorms are relatively common in the summer months. (<https://en.wikipedia.org/wiki/Alberta>)
- The lake is surrounded by about 3400 residences comprising over 10,000 people (details [https://www.calgary.ca/CSPS/CNS/Documents/community\\_social\\_statistics/sundance.pdf?noredirect=1](https://www.calgary.ca/CSPS/CNS/Documents/community_social_statistics/sundance.pdf?noredirect=1)) and consisting of mainly single family residences with a commercial area to the west.
- The community boasts Centennial High School, Father James Whelihan, Sundance Elementary, Fish Creek Elementary and Midsun Junior High School.
- There is a mix of public/residents only access, semi private pathway access and private lake front access.
- Shopping is close by in Shawnessy with many smaller and larger stores.
- Sundance falls within the Federal Calgary Midnapore Electoral Boundary.
- Sundance falls with the Provincial Calgary Shaw Electoral Boundary.
- Sundance falls within Calgary Municipal Ward 14
- The 178 and 78 City Transit buses service the community with off peak and on peak hours
- The Somerset CTrain station is accessible from Sundance over a walk bridge and takes 15 minutes from the western side.

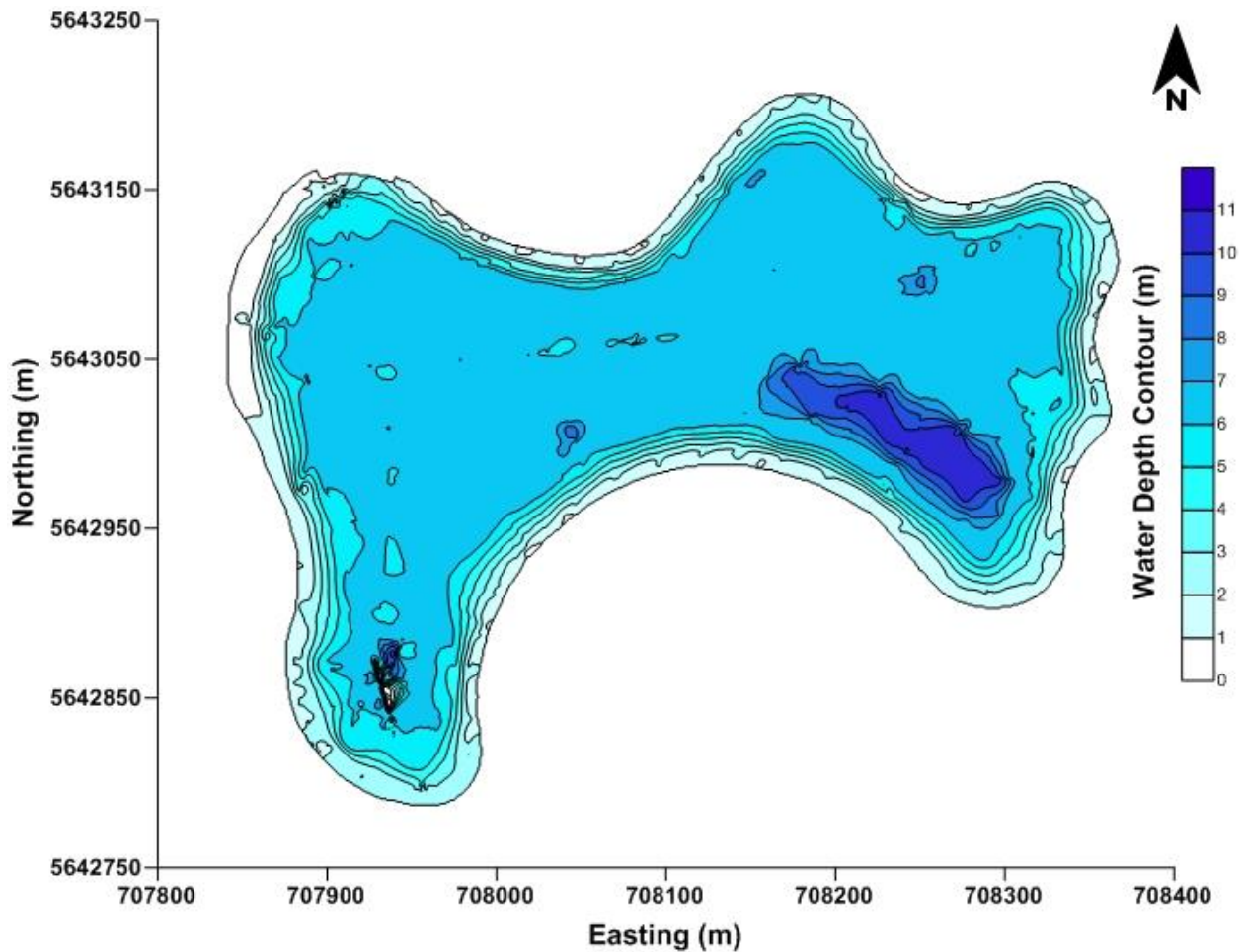
### **Association Facts:**

- Living in Sundance grants you the right to have a membership in the Mid-Sun Community Association consisting of Midnapore and Sundance.
- Lake Sundance Residents Association grants residents with Lake Sundance access but not access to Lake Midnapore.
- Lake Sundance has an annual General Meeting every year in October. All residents are welcome to attend.
- Lake Sundance has numerous rooms to rent for birthday parties, weddings or other special events. <http://www.lakesundance.org/hall-rentals.html>
- Lake Sundance is maintained for the benefit and pleasure of the residents. Guests are permitted within defined rules. <http://www.lakesundance.org/lake-rules.html>
- Membership dues must be paid yearly as per the caveats on title. Failure to pay will result in additional legal fees, penalties and interest which will impact future home sale. Please be respectful to other residents and pay your share on time.
- Lake Sundance has a yearly operating budget of about \$700,000.
- Lake Sundance maintains funds to provide for operation and replacement of equipment and buildings.
- Lake Sundance has canoes, kayaks, paddle boats, paddle boards and sail boards available to sign out on our lake on a first come first serve basis.
- Lake Sundance is always looking for ideas to improve the community and find excited and motivated volunteers to take on the challenge.

### **City of Calgary**

- While hanging at the lake is fun, many people also do day trips to places like the Calgary Zoo, Fish Creek Provincial Park, Heritage Park, Tyrell Museum, Head Smashed In Buffalo Jump, Kananaskis Country and Banff National Park.

# Bathymetric Survey



volume	687,000	m <sup>3</sup>
area	129,000	m <sup>2</sup>
max depth	11.0	m
avg depth	5.3	m

Bathymetric Survey performed by Stephen Goudy in the summer of 2018

