Running On Frozen Utah Lake



I hesitated to write this chapter. Running on a frozen lake is very risky. In recent years word has gotten out about this activity which I probably started and I'm wondering when the first tragedy will occur. Whether stupid or not, this is part of my running history and there are amazing photos to share. As of 2016, I have run nearly 250 miles on the lake. For years I was the only one doing it, but this past year dozens ran across the lake. If you must go, please take precautions.

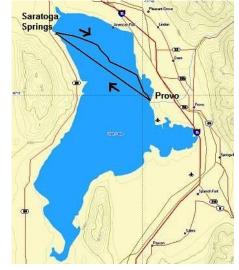
- Don't go alone
- Take a cell phone in a waterproof container
- Take a rope
- Wait until the ice is thick, at least six inches. Don't go when it is thawing.
- Stay away from the areas of hot springs near the northwest end and Lincoln Beach toward the south.
- Stay away from areas of incoming creeks and rivers on the east side.
- Be very careful around fissures that have standing water on either side.
- The ice is thinner near the shoreline and thicker out in the middle of the lake
- Don't run right after a snow. Snow can hide the cracks.
- Don't run after a rain. The top layer will be slushy and hide the cracks. It won't be fun running on slush anyway.

My First Run on the Lake

Back in 2007, in my quest to continue to seek out creative and interesting winter training runs, I embarked on a new unique adventure run. I live on the west shore of the largest freshwater lake in Utah, Utah Lake. It covers about 97,000 acres (151 square miles) and is 23 miles long (north-south) and has a maximum width of 13 miles (east-west.) It is a shallow lake, with an average depth of 9.4 feet. With six

days of below freezing temperatures, and an overnight low below zero, in the morning I ventured out on the frozen lake with my son. (I was naïve, that isn't long enough for a safe solid freeze). The lake appeared to be frozen solid. We walked out about a mile and visited three duck hunters who had set up about 100 decoys out on the lake trying to coax curious ducks to check out the phony duck colony. They had already bagged three ducks. As we returned to the shore, I recalled a conversation with a local woman in her 70s who told me that when she was a child, they used to ice skate all the way across Utah Lake during rare times of solid ice. The crazy thought entered my mind, "Could I run all the way across the lake?" I had no firm plans for the rest of the day so I decided to give it a try.

One hour later, I began my crazy run across Utah Lake. I did not know what my destination would be. The frozen lake would



My route across and back

dictate my course depending on how safe it was. I did hope to run all the way to the city of Provo, about

11.5 miles away.

The temperature when I started was about 10 degrees. I found a good rhythm as I started my run heading southeast across the ice-covered lake. I ran about a half mile south of the duck hunters, not wanting to disturb their efforts. I had excellent footing. The ice was covered in about a quarter inch of snow/frost. f I brushed away the snow, the ice was dark and smooth. My feet crunched in the snow as I ran forward.



had been pushed up with pressure. There were lots of clumps of ice covered with snow. I crossed over some amazing cracks with ice sheets pushed up that were about 5-6 inches thick. The landscape was incredible and everchanging. I never dreamed that there would be so many interesting things to see running across a frozen lake.



Ice mounds



Saratoga Springs disappearing behind me

The surface was generally smooth with some periodic cracks that extended for miles. I cautiously crossed them. To the south I could see what looked like an ice beach extending east/west across much of the lake and I could see that ice



The "person" I saw from a distance – an icy headstone

I thought I saw the figure of a person on the ice about a mile ahead so I set my sights on it in attempt to catch up. But as I came nearer, I discovered that the object on the ice wasn't a person but was ice pushed up by tremendous force where plates of ice thousands of feet across pushed together.

I next set my sights on two curious mounds of ice far to the horizon. In this way I could keep my run across the ice in a relatively straight line. I misjudged the distance. They must have been over a mile away because it took me many minutes to

finally arrive at the mounds. They turned out to be some pretty amazing ice mounds pushed up arranged in beautiful patterns.

I arrived at what appeared to be the east/west center of the lake. Miles to the southeast, I could see the tower for Prove airport. I changed my course to head in that direction. I started to hear some alarming cracking going away from my feet. The ice wasn't moving, but it was still wearisome enough to slow me to a cautious pace. The cracking sounds continued as I crossed a large area. I then started to hear some loud booming sounds that I have heard during past winters from the shore in times of freezing. The sounds were loud "CHOOOOM, POOOOOM" sounds. Every couple seconds I would hear the sounds all around me.

My feet still pushed against solid ice and I could not see any new cracks appearing. I could peer down into the lake through some clear ice and see that the thickness was at least 5-6 inches. The sounds made me feel very uncomfortable. I concluded that they were noises caused by powerful stress pressure in the plates of ice. I continued on but adjusted my course to head more directly to the shore across the lake.

The cracking in the ice continued, but the stress booms were left behind and decreased. The cracking sound would occur more often when I approach junctions of existing cracks. But still, the ice felt solid and never moved. The east shore continued to come closer. I noticed giant ice-flow mounds on near the shore and set my course to approach the largest ice hill. All cracking sounds soon went away and I again picked up my pace.

I soon arrived at a massive crack in the ice where the ice plates had pulled apart instead of being pushed together. It appeared to be pretty recent because there was water on the surface. I kept my distance and carefully crossed over the

After a couple hours and about nine miles, I arrived



Ice hills near the eastern shore

I had fun climbing the massive mounds, exploring the formations, and taking pictures. It was an remarkable sight. The forces of nature were impressive. I soon came across the tracks of a sled and many boot prints that were leading toward a peninsula about a mile further to the south. As I approached the shore again, I could see a man on the ice. He approached me as I arrived at the



Huge crack with water

at the eastern shore and explored the huge ice hills there were created by ice flows pushing against the east side of the lake. The hills were massive, about 20 feet high. Huge ice slabs piled on top of each other.



shoreline. He was curious where I had come from. I pointed to a location far across the lake that was barely visible through the ice haze. He asked how far away it was. I told him about 12 miles. He was stunned to consider that I had crossed the entire lake. "Are you being picked up?" he asked. "No, I'm going to run back across," I replied. I asked him where I was. He explained that I was near Center Street in Provo. I went up off the ice and could see that I was on a paved trail, part of the Utah Lake State Park.

Three hours had passed since I began my crossing. It was time to return. Through the icy haze I could barely pick out a landmark on the far shore that was near my home. I decided that I would try to return along a direct line. I was now confident that the ice was solid and I could make better time. I went through a large section where the snow cover had been swept away by the wind

I next came upon a truly amazing sight. Instead of snow cover, the ice was covered with billions of ice/snow crystals that were 2 inches high. The massive field went on as far as my eye could see! I had never such a sight before. The crystals crunched under my feet. I hated to disturb the remarkable sight.



refroze, looking like a river of ice and presented a beautiful reflection in the setting sun

My route continued at a straight line. Despite my quick pace, it seemed like my home shore just wasn't coming closer. I looked back and could see my tracks



extending straight to Provo. I was



Ice crystal field

I soon came upon a significant crack that extended south across the center of the lake. Water had seeped up through the crack. It



My tracks coming from Provo

getting close to the mid-point between the shores. The sun descending toward the horizon and I wanted to make sure I was off the ice before dark because I knew the temperature would take a nasty dive.

As I neared the shore, the upheavals and cracks appeared with more frequency. The snow was also becoming a little deeper and I crossed a curious snow drift along a crack. As I neared the shore an incredible flock of geese filled the sky overhead. There were hundreds in dozens formations. Honking noises could be heard for miles as this flock flew over the lake, heading to the southeast. The final crack I crossed was a very new one. I was very surprised to feel the ice on both sides of the crack dip down about an inch as I crossed over. When I approached Eagle Park, I could someone on the hill watching my progress closely. When I finally arrived, the guy asked me if the ice was safe. I told him that it was pretty safe because I had just run to Provo and back. I could tell that he had difficulty comprehending what I had just said.



Frozen crack with ice crystals

This 23-mile training run far exceeded my expectations. Seeing the effects of Mother Nature on the ice was amazing. Viewing the cracks and upheavals from the massive ice sheets made me think how similar these effects are compared to the land floating on magma. In a much lesser degree I saw cracks, canyons trying to form, and mountain ranges being pushed up. It was a thrilling experience.

50-miler on the ice

A week later I was back out on the lake, this time with a fellow ultrarunner, Brent Rutledge. We would be attempting to run 50 miles on the frozen lake.

I came up with a fun quad crossing of the lake extending from the north to the south. It would truly be one of the flattest 50-mile runs in history. I dropped of some aid station items at what would be about our half-way point on the short near Soldier Pass road.

We drove to Eagle Park and were off and running at about 6:20 a.m. Our visibility through the fog (inversion smog) was about 5 miles or so. I was immediately alarmed at how many fresh cracks there were for us to carefully stride over. There were many more than on Monday. It was only 5 degrees, yet during the night water had seeped up through large cracks that had opened or reopened at some point. We were very cautious and it slowed our pace. Our flashlights would see the cracks and we would hope each time that they would hold our weight. After a little while I suggested that we spread out a little more to keep our weight distributed better. It was a freaky experience in the dark.



Then, we heard our first loud boom, "Choooommm." "What was that!!?" Brent asked. I chuckled and explained that we would hear plenty of that. The booms continued for awhile until we left them back to the north. Brent commented that he could never get used to those eerie, fightening sounds. The dawn was approaching but there were no landmarks for us to see through the haze to set our course by. We had to "fly by instruments" and trust my GPS to keep us on a straight line. We immediately learned what a difficult task this was. We started wandering to the left and right, getting off course quickly. As the hours

went by, we became much more skilled in keeping a straight line. At times it would be impossible without

the GPS because sometimes there was not even a chunk of ice sticking up for us to set our sights on, just the flat horizon fading into the haze.

We then noticed that we both would very naturally drift our course to the left, toward the sun until I checked the GPS and corrected our route. This happened over and over again. Our bodies wanted to go toward the warmth of the sun. Brent would sometimes go ahead and it was funny to watch him drift off course without the help of a GPS. He would eventually look back and see me heading in a different direction.



Brent, a little off course heading toward the rising sun
Note the large frozen crack

The variation of the surfaces we ran over throughout the day was amazing. We ran over:

- Dark slick ice covered with about a half inch of snow
- Exposed slick ice with patches of thin snow cover
- A snow/frost covering that looked like styrofoam
- Dark ice covered with crystals
- A long tiring section of snow 2-4 inches deep

As we ran in what was about the middle of the lake, we commented to each other how amazing this experience was. Some would find the empty landscape boring. We found it to be exciting and fascinating. It seemed like we had been transported to Antarctica. It was quiet, desolate, empty, and frozen. Yet I knew full well that there were tens of thousands of people within only 10-15 miles. Amazing!

After about 3.5 hours and 15 miles, my GPS took us to our east shore destination, Spanish Fork creek. By roads, it would have taken us 35 miles to travel around the lake by car to this point. We explored the ice rubble collected near the shore and then quickly headed toward our next destination – Bird Island.





Me, near Spanish Fork Creek

Bird Island was over three miles away. Soon I was able to pick out a white object toward the horizon in the direction that my GPS was pointing. I concluded that it must be the island, so I put away the GPS and enjoyed following a landmark.

Bird Island became larger and larger. We pushed the pace and soon arrived. We were amazed at ice

piled up. We didn't stay long and set our course toward West Mountain to the south which we could see through the haze.

Our run toward West Mountain was the most frigid



Brent, running ahead toward West Mountain



Rubble ice on Bird Island

portion of the run. The breeze kicked up in our face and a chill went right through our bones. Thankfully it only lasted for about a half hour. We crossed over some curious tracks in the snow. We stopped to examine what was clearly a snow angel created by a large bird. We could see the brushes made by the wings. The bird left

behind many feathers. Why it did that, we did not know. As we approached the shore we ran by frozen round holes in the ice left behind by ice fisherman.

At the park at Lincoln Point, we climbed up onto the shore to check out the park and to sit down for a couple minutes for the first time during our adventure. We didn't stay long. We knew that we still had 30 miles to travel before the day was done. As we left the shore, we watched a lone ice fisherman drilling in the ice. I'm sure he thought we were a curious sight as he watched us disappear over the icy horizon.

After a couple miles, we entered into what must have been another unstable section of the ice. The surface was a very runnable styro-foam looking surface. At times we would stop dead in our tracks as we both heard and saw small cracks appear in the ice near us. Soon the booming sounds started again. One series of booms traveled along a huge crack that must have been similar to a fault line. Then, I experienced an amazing feeling, an icequake! It only lasted a couple seconds, but I could feel the ice "roll" under my feet, similar to the feeling felt in an earthquake. We could feel that the ice below us was thick and solid, yet the sounds and vibrations really freaked us out. A very loud traveling booming sound seemed to travel within



An incredible "fault line" full of rubble

only twenty feet of us. We both stopped and said, "Wow, that was close!" We were anxious to get away from there and finally left it those amazing effects of Mother Nature behind us.

Next up for us was a very long section of deep snow, 2-4 inches. It was like running in sand. This section quickly started to wear on us and our feet ached from the challenging surface. Finally the shoreline came into view. We climbed up on the shore, followed my GPS and went right to the cooler that I dropped off in the early morning. We sat down and enjoyed drinking hot soup and water that wasn't freezing cold.

After a wonderful lunch, feeling much stronger, we again set out along the snow-covered ice to return to Bird Island. We again traveled through the "icequake" section. After passing by Bird Island, the sun finally broke through the fog and dramatically warmed our backs. As the eastern shore came into view we crossed



Brent running through snow, nothing on the horizon

over our tracks from the morning, 23 miles earlier. During this section we really had a difficult time keeping our line straight. With the shore in view, we discovered that we naturally kept drifting to the right, toward the shore which our minds knew would be our next destination. Over and over again we had to correct our course toward the left.

Finally we arrived at Utah Lake State Park in Provo. It was time to head for home. I aimed my GPS to the final waypoint, 11 miles to the northwest. The ice surface for the next couple miles was very slick. Several times we both almost fell. Our route zigged a little as we tried to find stretches of snow to increase our pace. The sun was setting and peeked through the overcast one last time giving a marvelous display of light. As we ran through the middle of the lake, we couldn't see the shore ahead and I commented that without the GPS we both would probably travel in huge circles for the entire night. That was an uncomfortable thought.

As the dark arrived again, the lights of Saratoga Springs could be seen blazing on the horizon. With a better running surface we both really kicked it into gear. We now felt refreshed and rested. Certainly the totally flat surface had been quite a challenge for the 50-mile distance. I longed for hills! The lights on the shore came closer and closer. We soon were again slowed by more frequent wet cracks that caused us to carefully tip-toe across. The ice booming sounds again greeted us, but I noticed that I was finally getting used to the strange sounds and didn't pay much attention to them.

After about 13.5 hours, we again returned to our starting point. We had planned to run in quicker but didn't anticipate the slower cautious pace though many sections. I checked my GPS odometer which read 50.06 miles. We did it! 50 miles on the ice. What a remarkable experience!

End-to-end run on the lake

Two weeks later, I ran the entire length of Utah Lake north to south, about 30 miles. I started at the Saratoga Springs development marina and ended out at the town of Goshen.

I began my run in the dark at 4:30 a.m. The fog was gone and I had a great view of the lights across the lake. The moon was out, casting welcome light across the ice. Many times I turned out my light and ran only with moonlight. With the recent snow, the entire length of the lake had at least an inch of snow. This blanket insolated the ice and only a very few large cracks were exposed and wet. The surface was the most solid I had seen. I didn't hear any cracking or ice booming. It was a nice quiet morning run without any

worries about thin ice. The ice was much smoother away from shore (fewer ice chunks to trip over) and I was able to keep a good pace going. A few cars and trucks drove south on the highway near the western shore. I shined my flashlight toward them, letting them wonder what the light was doing out on the frozen lake.





I used my GPS to set my course toward the far south end of the lake. I had a long run ahead far out on the ice. As dawn approached, the temperature continued to dive. Finally the sun started to light up the sky, but it would be a couple hours before the rays would provide me any warmth. After about three hours, I was very surprised to see two sets of tracks heading east. They were the tracks Brett and I made a couple of weeks ago. Despite the newly fallen snow, the tracks were very distinct and undisturbed.

I watched with envy the warm line of sunshine as it toughed the western shore. Slowly it crept toward me and when it finally hit me I let out a cheer. The snow made amazing sparkling reflections as its low angle hit the surface of the snow. Little by little the snow became deeper the further I ran to the south until it was over four inches deep. The deep snow slowed my pace.



My tracks extend straight from the north



As I neared the southern end of the lake, I ran across many tracks. ATV tracks and cross country ski tracks. I worried if I would have difficulty finding my way through tall reeds to exit off of the lake. I decided to follow the skiing tracks in hopes that they might lead me to my to an exit point without having to stomp through reeds. As my route skirted vegetation sticking up through the ice, I would run on much thinner ice. Several times it started to crack and sink down an inch or so. I wasn't too concerned because I knew the lake wasn't very deep here, but still I wanted to keep my feet dry.

The skiing track ended and turned back the way they came. The open ice also ended and I had no choice but to make my way through some brush. After a half mile winding through branches sticking up through the ice, I again reached an open field of snow/ice. The problem now was that the snow was about a foot deep. The going was slow, tiring and difficult. I plodded on until I reached the tracks of an ATV. From there I was less than a mile from the road to Goshen. At that small town my wife came and gave me a ride home.





That first year, I ran across the lake and back two more times and added some morning runs near the shore for a total of about 120 miles. The next year, the lake didn't freeze as solid and I didn't dare go out on in but in 2009, I ventured out with my do to test of the ice with my dog. I discovered that she loved to run crazy back and forth on the ice. In 2013 I put my GPS watch on her to see just how far she would run and how fast. This video shows how crazy she is running on the ice.

In the following years, I made other trips on the lake. <u>This slide-show video</u> presents a wonderful afternoon doing a loop on the lake to American Fork.

This video show a run I made to Bird Island and back.

In 2014, the lake never truly froze over and in 2015 it only froze hard for a few days. I heard about only a couple runners running the lake during those years. I've lost my desire to run out there because of the danger involved.