

## **Western States 100 by David Holmen** **June 2012**

On June 23, 2012, I attempted the Western States 100 Mile Endurance Run (WS100). My result was Did Not Finish (DNF). This was the first time I've had a DNF in an ultramarathon.

WS100 is one of the oldest 100 mile trail runs in the world. It's also one of the most difficult. It follows the historic Western States trail from Squaw Valley, CA to Auburn, CA. This trail is one of the routes used by early settlers during the California gold rush.

I first became aware of this race in 1998. Shortly after doing my first ultramarathon, I read excerpts from a book by Robert Boeder called *Beyond the Marathon*. It's an account of his experience completing the Grand Slam of Ultrarunning by finishing the Western States 100, Vermont 100, Leadville 100 and Wasatch Front 100 all in the same year. I later bought and read the whole book. From this point on, I was intrigued by the thought of someday running this race.

It's very difficult to get into WS100. First you have to qualify. There are numerous 50 mile, 100 kilometer and 100 mile races that are designated as qualifying events. To qualify, you need to finish one of the 50 mile races within 11 hours, finish one of the 100K races within 14 hours, or finish one of the 100 mile races within its official cutoff time. (The 100K qualifying standard will change to 15 hours starting in 2013.) You can also qualify by finishing three 50 mile trail runs within the same qualifying period. I qualified by running the 2011 Lean Horse Half Hundred in 8:10:04.

If you qualify, you can put your name into the WS100 lottery. WS100 is like the Boston Marathon of ultrarunning. Nearly every ultrarunner aspires to do this race. The field is limited to approximately 400 runners. Many of these spots are reserved for runners who have earned automatic entry (e.g. the top 10 male and female finishers from the previous year). Since the number of applicants greatly exceeds the number of slots available through the lottery, the odds of getting in on the first try are slim. I estimated my chances at about one in eleven. If I didn't get in this year, I planned to keep running qualifying races and applying every year until I got in. This year, I got lucky and my name was drawn.

After being accepted, you still need to meet a service requirement. You can do this by either volunteering at other ultramarathons or doing trail maintenance work for a total of eight hours. I met my service requirement by volunteering at a local ultramarathon.

WS100 challenges a runner in many different ways. There are races that are more difficult, but few, if any, that require more versatility. One of the reasons I wanted to do this race is to experience the whole world of trail running in a single race.

The race starts in Squaw Valley at an elevation of 6200 feet. In the first 4 ½ miles, the course ascends 2550 feet to reach an elevation of 8750 feet at Emigrant Pass. This is very similar to the elevation profile of the early miles of the Pike's Peak Marathon. At the top, the temperature can be below freezing. It's also not unusual for runners to encounter snow fields.

From Emigrant Pass, runners begin the first of many long steep descents. Running downhill may sound easy, but it's actually the biggest challenge of this course. There's a total of 22,907 feet of descent. There's also a total of 18,040 feet of ascent, but the climbs are merely slow and tiring. The long, often steep descents are punishing.

The first third of the race, sometimes called the highlands, follows a ridge line where the average elevation is about 7000 feet. After about 30 miles, the trail gradually works its way down to lower elevations.

The middle section of the course includes three deep canyons. This is where runners spend their afternoon, and it's the hottest part of the course. In a typical year, the temperature inside the canyons rises above 100 degrees, adding extreme heat to the long list of challenges.

If you can endure the highlands and the canyons, the course gets easier. The last 38 miles have a gradual downhill trend, but not as steep. Most runners, however, will run this at night, adding navigation in the dark to the list of challenges.

At 78 miles, runners must cross the Middle Fork of the American River. This usually involves fording a river that may be waist deep, while holding onto a cable. In some years, the river is too high, and runners are taken across in rafts.

After 22 more miles, the course finishes on the track of Placer High School in Auburn.

When I found out my name was drawn in the lottery, I was excited that I wouldn't have to wait any longer to get my chance to run this race. I was also overwhelmed by the amount of training it would take to get ready. I've had some good results in ultramarathons, but I mostly run marathons, and I mostly run on roads. I'm still relatively inexperienced at trail running and running steep downhills is one of my biggest weaknesses.

In December, I immediately changed how I train. Instead of avoiding winter weather by training on a treadmill, I headed outdoors to start running hills. We had very little snow that winter, so I was also able to train on some local trails that are normally used by cross country skiers. At first, I had to do most of my training after dark. I embraced this as an opportunity to get used to using a flashlight to find my way on the trail.

I was ramping up my mileage and getting more comfortable with downhill running when I suffered a severe hamstring pull in February. For more than a week, I couldn't run at all. For the next week, I did a few short, very slow runs on a treadmill. Before the injury, I had already entered several races. I had marathons scheduled every other weekend for the foreseeable future. I entered these races before I was accepted into WS100. By wearing a compression wrap and abandoning time goals, I was able to run my next two marathons while still seeing gradual improvement in my hamstring.

Eventually, I was able to train and race normally, but I wasn't ready to train on trails until late April. That gave me only two months to finish training for WS100. I was essentially starting over. To build my endurance, I ran marathons or ultramarathons for seven straight weekends. My day to day training runs were a mixture of trails and hilly roads, but they were nothing compared to the hills I would face in WS100. To get a longer workout on trails, I ran the Ice Age Trail 50K. To get used to longer downhills, I ran the Wyoming Marathon. For a longer workout, I did the FANS 12-hour run. Finally, I ran Marathon to Marathon on a hot, humid sunny day. This race was my best training for the heat of the canyons.

My goal when I started training was to finish within 24 hours. Based on some of my past ultramarathon PRs, this seemed like a challenging, but realistic goal. After losing so much training time because of an injury, it knew it was probably unrealistic, but I still felt I had to try. Finishing WS100 in 24 hours and earning the coveted silver belt buckle is the holy grail of ultrarunning.

Running WS100 should not be attempted without support. John Greene agreed to accompany me to California and be my one man crew. I posted a request on the "Find a Pacer" page of the WS100 web site and got a quick reply from Allan Abrams. Allan lives in California and was very excited about having an opportunity to experience the last 38 miles of the race. He even did the sponsored training runs that cover this part of the course over Memorial Day weekend.

When John and I arrived in Sacramento and made the drive to Squaw Valley, I started to fully grasp the magnitude of the hills I would need to run. One of the keys to running this race successfully is to be able to run the downhills without trashing your quads. You either have to run them fearlessly, or you need to walk the steepest parts and run gently on the more runnable parts. Knowing I wasn't able to do the former, I had to figure out how to do the latter. I was starting to realize I was in over my head. The sensible thing to do was to abandon my goal of a 24 hour finish and make sure I had a realistic plan for simply finishing within the 30 hour time limit. Unfortunately, I didn't do that.

We stayed at the Squaw Valley Lodge. Our building was right next door to the Olympic Plaza, where all of the pre-race activities were held. Squaw Valley is a ski resort that once hosted the Winter Olympics. On this weekend, the town was taken over by runners, their crews, race officials and volunteers.

The day before the race, I went to the required medical check-in, signed three release forms acknowledging all of the many risks I was assuming, and received all kinds of swag (including a backpack to hold everything). Later we met Allan and had lunch. After lunch, the three of us attended a mandatory pre-race briefing.

By this time, we knew the weather was not going to be typical. There was no snow on the trails, it wouldn't be as hot as usual in canyons, and the river level was low enough that we would be able to ford the river. All of this was good news. The only cautious news was that the temperatures on some parts of the course would be unusually cool.

For days, the weather forecasts for Squaw Valley, Foresthill and Auburn all predicted bright sunny days with no chance of rain. It was only the day before the race, that I started seeing a 20-30 percent chance of rain in Squaw Valley between 3 and 6 AM. When I woke up on race day, it wasn't raining, so assumed the threat of rain never materialized.

Since I still expected it to be at least somewhat hot in the canyons, I wore shorts and a singlet. I started the race with a Tyvek jacket and gloves to get me through the high elevation sections, where it would be cold. I assumed I would only need them for the highland section of the course and could then give the jacket to John.

My original pacing plan was to walk all of the long climbs and run slowly on the flat or downhill sections. When I realized there would be lots of downhill sections that were too steep to run slowly, I had to come up with a new plan. The revised plan was to walk anything steep (up or down) and run anything that seemed runnable. It's easy to say that, but to carry out that plan proved to be very problematic.

The first few miles were on a dirt road. Despite the steep grade and the elevation, there were sections that seemed surprisingly runnable, so I ran for a few minutes here and there and power walked the rest. I thought I was banking time that would allow me to walk some of the downhill sections. I didn't realize how this would backfire.

After about two miles, I felt a few large raindrops. At first, it wasn't any big deal. After about three miles, I heard thunder and saw a couple flashes of lightning. A short time later, a steady drizzle

began. As we continued to climb, it got cold enough that the drizzle briefly turned to sleet. We were starting to encounter strong wind gusts, and the sleet stung my face.

There was only one part of the first climb that I found difficult. It was a very short but extremely steep section that seemed too steep to run or walk. My first three attempts to take a step up resulted in slipping back down. I had to get on all fours to make progress, but I made it to the top.

When I saw the monument at the top of Emigrant Pass, I knew we were done climbing. It was still drizzling, but I assumed once we got off the mountain the drizzle would stop.

Now we started the first long descent. It was a narrow single track path worn into the hillside. This is where my fast ascent backfired. The trail was too steep to run comfortably. I knew I should be walking a lot of it, but that proved to be problematic because I was surrounded by other runners who started fast. Trail etiquette requires stepping aside if a faster runner wants to pass. There wasn't enough room to make forward progress while letting runners pass. At this point we were still bunched up tightly, so the only way to keep moving was to keep up with the pace of the runners around me. This forced me to run, but the steep grade forced me to "put on the brakes" to maintain a pace where I felt like I was under control. Resisting a downhill is the worst thing you can do. There's no faster way to trash your quads. I knew that, but I felt trapped and did it anyway. This was my biggest mistake of the race. After some easier miles, we reached another sustained downhill, and I did the same thing. By the time I reached Red Star Ridge, I had already sown the seeds of my destruction.

I had two other problems. First, it was still raining. I wasn't dressed adequately for rain in these cold temperatures, and I was getting very cold. Also, I didn't adjust my fluid intake for the colder temperatures. I didn't realize it yet, but I was overhydrating badly.

The next long descent was into Duncan Canyon. By now, we were getting spread out along the trail, so I had more freedom to run the downhill the way I wanted. I quickly learned to switch back and forth between running slowly on the easy sections and walking when it got steep or rocky. I was finally doing it right. Unfortunately, I could already feel soreness in my quads from the way I was running earlier. By now, I realized I wasn't going to break 24 hours.

The rain kept up for almost 30 miles. As we started getting close to the Robinson Flat aid station, I briefly found myself unable to run, even on a nice flat stretch. I suspected it might be a symptom of hypothermia, which is something I experienced a few years ago in a 24-hour race. I was able to fight through it and resume running, but I considered dropping at Robinson Flat. Because of the cold rain, this race had already ceased being fun. Now I appeared to have a potentially serious medical condition.

When I got to Robinson Flat, I had my first weigh-in of the race. I did a double-take when I saw the number on the scale. I was 14 pounds heavier than I was at the pre-race weigh-in. The person who weighed me suggested it might be because my clothes were wet, but I knew that couldn't account for all of the weight gain. This is when I realized that I was overhydrating. I should have known better than to drink as much in cold conditions as I would on a relatively hot day. Deep down I knew that, but I didn't expect it to rain for this long and I expected it to start warming up.

This was the first aid station where John met me. He resupplied me with Gu packets and S-Caps and helped me fix a problem with one of my shoes.

I pressed on after Robinson Flat, largely because I didn't want to disappoint Allan, who drove a long way to pace me. I kept telling myself I would reach the canyons soon, and it would be much warmer. Within a mile, I realized I had made a bad decision. The wind picked up and I got much colder.

Suddenly all my fingers were numb. I worried that hypothermia was causing reduced blood flow to the extremities and my legs could be next. If I lost the ability to run, I would begin a downward spiral. I wouldn't see John again for 25 miles, so there wouldn't be any convenient places to drop.

I coped with my overhydration by reducing my fluid intake dramatically. I was able to take frequent pee breaks, so I knew I would eventually excrete the excess liquid. Unfortunately, the pee breaks not only took time, but each time I stopped, I got cold. I was really looking forward to the canyons. I actually wanted them to be hot. I needed relief from the cold.

When I eventually reached the Last Chance aid station, I did another weigh-in. My weight was still up, but it was improving. I was now warm enough to remove my jacket and tie it around my waste. A short time later, I took off my gloves and saw how puffed up my fingers were. This was another sign that I was experiencing dilutional hyponatremia. I knew I would eventually get over it, but the frequent stops to pee were causing my quads to stiffen up.

By the time I reached the long descent into Deadwood Canyon, I was really struggling with downhill running. I could run the gentlest grades slowly, but anything steeper forced me to walk. When I had to step down on rocky sections, I often was paralyzed for several seconds while I found a way to brace myself and studied the easiest way to step down without losing my balance and falling. The trail was narrow and one side was a steep drop-off into the canyon, so a fall could be life-threatening.

I eventually made it to the bottom of the canyon, but it was slow, painful and scary. Next I had a steep 1500 foot climb up to Devil's Thumb. I knew I would have to hike the whole thing. It was slow going, but it was easier than the downhill.

The next canyon was El Dorado Canyon. It started off very gradual. At first it was slightly runnable. A gradual downhill road led us to a gradual downhill trail, but before long, it once again became too steep to run or walk at anything but a slow pace. The closer I got to the bottom of the canyon, the steeper and rockier it got. It was another narrow trail on the edge of the canyon wall, so I once again had to be very deliberate where there were rocks. By now I was starting to realize that at the pace I was going, finishing within the 30 hour time limit was going to be a challenge.

When I reached the aid station at El Dorado Creek, I received the most encouraging words I heard all day. I was told it's all uphill from here. The climb to Michigan Bluff was 1800 vertical feet over 2.8 miles. I knew it would be slow, but uphill wasn't painful. I also knew that I had plenty of time to make the cutoff. I had been told that Michigan Bluff is the hardest cutoff to meet. If you get there in time, you have two hours to reach Foresthill, and after that it gets easy. That's the conventional wisdom. I knew I would need much more than two hours to get from Michigan Bluff to Foresthill, so I needed to arrive with a cushion. I also knew that there was a lot of downhill after Foresthill. Normally, it would be easy downhill. For me, in my present condition, it was likely to be more than my quads could handle.

Midway through the climb, I crossed a stream. There was a very short downhill section that had some rocks. For the first time, I noticed it was getting dark. As short as this stream crossing was, it was terrifying. My quads were almost completely immobile. Stepping down over rocks put me in danger of losing my balance, and I couldn't see well without a light.

The climb to Michigan Bluff took longer than I thought, but I still got there well ahead of the cut-off. Realizing that I still had to get through Volcano Canyon, it didn't seem likely that I could get to Foresthill in time to beat the cutoff. It also didn't seem likely that I could maintain the pace I would need to get from Foresthill to the finish in time.

John did everything he could to help me. When I arrived at Michigan Bluff, he had my headlamp and flashlight, even though I didn't expect to need them until Foresthill. (I had already been told by the safety patrols that I couldn't leave Michigan Bluff without a light.) He also had the foresight to drive to Auburn and check into our motel before heading to Michigan Bluff. He was now planning to meet me at every accessible aid station. He was even prepared to pace me from Michigan Bluff to Foresthill. Normally, pacers aren't allowed until Foresthill, but you can pick up a pacer at Michigan Bluff if you arrive after 8 PM.

As much as I wanted to finish, I had done the math and realized it wasn't realistic. I was no longer capable of running or walking the pace I needed to average, and I still had 44.5 miles to go. Before making a decision about dropping, I knew I should talk it over with John. John tried to persuade me to press on, figuring I had nothing to lose by trying. Then he asked me if it would be unsafe to continue. That's when it completely sank in. I still had to run through Volcano Canyon. It's not as long as the other canyons, but it's still steep. I had heard that it's not as technical as the other canyons, but I knew there had to be at least a few sections where I would have to step down over rocks. At the aid station I had difficulty just stepping into a port-o-potty. Not having seen this canyon, I didn't know if there were any narrow sections with steep drop-offs. I would have to run it in the dark and discover the terrain a few feet at a time. I had a bright headlamp and a flashlight, but if any part of it was like the previous two canyons, I couldn't afford a single misstep. That's when I knew it was over.

I turned in my wrist band, chip and the tear off tag from my bib. Then we took the next shuttle back to Foresthill. I still needed to give Allan the bad news. We couldn't call him because John's cell phone wasn't getting any reception. I also wanted to apologize in person for letting him down.

When we got to Foresthill, I didn't see Allan. I explained to one of the volunteers that I had dropped at Michigan Bluff, but needed to tell my pacer. She led me to the pacer check-in table. Allan wasn't there, so we gave his name and bib number to the volunteer and explained the situation. He didn't know where Allan was. He checked his sheet and saw that Allan was signed in, but then he asked me if Allan had signed in at the Squaw Valley check-in booth. When I confirmed that he had, the volunteer said he didn't know if Allan was there yet. I knew that Allan had planned to arrive early and wait for me, so I knew he had to be there somewhere. I looked around and didn't see him. The same volunteer who led me to the pacer table said that sometimes pacers wait for their runners at the point where runners arrive, so she led me there. Allan wasn't there.

In the meantime, John went to get the car, which was 7/10 of a mile away. My phone was in the car, and I could try to call Allan. John's phone had no reception, but I had a different carrier and sometimes had reception in places where John's phone didn't.

While we were waiting for John to get the car, I started getting cold. I was warm enough while I was running, but I wasn't dressed warm enough to stand around in the cool night air. The volunteer saw I was getting cold and suggested I sit in an area where they had a heat lamp. When we got there, she was told by another volunteer that I couldn't sit there. She would have to take me to the medical tent. The volunteer at the medical tent insisted on bringing me inside the school building before putting a blanket over me. It took a while for me to explain to him that I dropped out of the race for non-medical reasons. He assumed I dropped because of hypothermia.

Fortunately, John arrived and I was able to leave. John led me to the car and I tried to call Allan. I got his voice mail and left a message. I was kind of brief. I said I had dropped out at Michigan Bluff. Then I was speechless. I didn't really know what else to say. I also didn't know what else to do, so I also sent him an email. I didn't want to leave without talking to him, but I was out of ideas. We had

already looked around, and I couldn't wait at the aid station without getting cold. John wasn't comfortable leaving either, but we drove back to our motel in Auburn.

Shortly after we got into our room, Allan called. He seemed a little exasperated to hear that we were back in Auburn. Nobody had told him I was out of the race. All he knew was that I had checked into the Michigan Bluff aid station at 9:03. It was now about 11 PM. Allan said he would wait to see if any other runner needed a pacer.

The next morning, John and I drove to Placer High School to see the late finishers come in. We arrived a little after 9:30. The race ended at 11 AM. We saw several runners come through. I was hoping that Allan found another runner so his trip wouldn't be wasted, but I wasn't optimistic. I realized that if he did, it would be a runner who arrived at Foresthill shortly before the cutoff. I assumed that meant we weren't likely to see him until the last hour of the race.

We sat in the bleachers near the spot where pacers separate from their runner as the runner is about to cross the finish line. In the last hour of the race, I was watching all the pacers, looking for Allan. I never saw him.

It wasn't until the next day that I learned that Allan did find a runner who was in need of a pacer. His runner finished strong and reached the finish line in less than 29 hours. Allan must have finished right in front of us, but I missed him because I didn't expect him that early. I was glad he got to finish his race, even though I never made it past Michigan Bluff. He was lucky to find a runner who ran a much smarter race than I did. I really let him down.

Even though I was on the course for over 16 hours, I only covered 55.7 miles. At first, it was brutally cold. Later, the hills were slow and painful. The only part that seemed easy was the initial climb. Ironically, I heard some local runners describe that section as the only hard part.

This race is very humbling. I have a lot of respect for anyone who finishes this race and earns the bronze belt buckle. I'm now in awe of the runners who beat 24 hours and earn the silver buckle.

After a brief stop at the motel, John and I came back for the awards ceremony so we could see all the finishers get their buckles. Although many runners struggled with the cold wet weather at the beginning, conditions overall were quite favorable. There was no snow in the mountains and no heat in the canyons. They had the highest finisher rate ever. They also awarded the most silver buckles ever. The male and female winners both set new course records.

The participant guide for this race has a section that describes numerous medical problems that participants often encounter. I experienced a few of them. Most notably, I suffered from a condition called "bucklemania," which is characterized as a brain cramp. I know I should have been able to finish this race, but I got greedy and tried to pace myself for the silver buckle. This race punishes mistakes. The mistakes I made in the first 15 miles were enough to keep me from finishing.

I didn't just come to Squaw Valley for the belt buckle. I came for the experience. I got some of what I came for, but not all of it. I experienced the tough climbs and the long brutal descents. I experienced about 30 miles of high elevation running. I experienced freezing conditions in the early miles. Indeed, with the rain and sleet, I got more than I bargained for. I never experienced the heat of the canyons. Weather was so cool that heat was never an obstacle. Even on the tough climb up to Devil's Thumb, I never really felt hot. I didn't run through the night. It was actually the fear of running into a canyon at night that made me stop. I didn't get far enough to experience the river crossing. Runners who pace themselves well in the first 62 miles are rewarded with 38 easier miles at the end. I didn't get to experience that, but I also didn't pace myself well, so the late miles would have been

difficult for me. I saw the elation of runners who made it to the finish line on the track at Placer High School. I can only imagine what that feels like.