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Founded in 1984, AdventureCORPS, Inc. is an athlete-run firm producing and promoting ultra-endurance and extreme sports events, lifestyle, and media. Adventure is our way of life, so we are pleased to host the 34th anniversary Badwater Ultramarathon, known globally as "the world's toughest foot race," on July 11-13, 2011.

A true "challenge of the champions," this legendary race pits 90 of the world's toughest athletes from 18 countries and 25 American states – runners, triathletes, adventure racers, and mountaineers – against one another and the elements. Covering 135 miles (217km) non-stop from Death Valley to Mt. Whitney, CA in temperatures up to 130F (55 centigrade), it is the most demanding and extreme running race offered anywhere on the planet.



The start line is at Badwater, Death Valley, which marks the lowest elevation in the Western Hemisphere at 280' (85m) below sea level. The race finishes at Mt. Whitney Portal at 8,360' (2533m). The Badwater course covers three mountain ranges for a total of 13,000' (3962m) of cumulative vertical ascent and 4,700' (1433m) of cumulative descent. The Portal is the trailhead to the Mt. Whitney summit, the highest point in the contiguous United States.

Now in its twelfth year producing this race, AdventureCORPS is pleased to welcome the support of race sponsors Hammer Nutrition, Moeben Eco and Performance Apparel, Montana Timing, Caring House Project Foundation, and ZombieRunner.com. AdventureCORPS also appreciates the support of the Furnace Creek Inn and Ranch Resort, Stovepipe Wells Resort, Panamint Springs Resort, Seasons Restaurant of Lone Pine, Pizza Factory of Lone Pine, Dow Villa of Lone Pine, the community of Lone Pine, CA, and other generous companies and individuals.



Additionally, we salute the National Park Service, U.S. Forest Service, Inyo County, California Department of Transportation, and California Highway Patrol, whose staff - and permits - oversee this event.

We wish everyone - racers, crews, staff, sponsors, media, and fans - a safe and successful race this year. May this truly be a life-changing experience for everyone.

Sincerely,

Chris Kostman

Race Director and Chief Adventure Officer

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"We're Out There"



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Front Cover:

Zack Gingerich and Jamie Donaldson

Inside Front Cover:

Marco Farinazzo leads Zach Gingerich

Page 1:

Tutu Man Keith Straw leads Susannah Harvey-Jamison, Marhew Aro, Robert Gryfe, and Iris Cooper-Imhof

Page 3:

Chris Kostman with Jimmy Dean Freeman, Alisa Springman, and Michelle Barton

Page 36:

2010 Final Finishers Monica Ortero and Jack Denness

All photos by Chris Kostman, unless otherwise noted.

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GENERAL INFORMATION

MANDATORY RUNNER CHECK-IN:

10:30AM-12:30PM, Sunday, July 10, 2011, Held in the Marquez Room at the Furnace Creek Inn. Every runner, along with their designated Crew Chief only, must personally attend at some point during the two hour timeframe. Photo identification is required for all runners. Please bring the completed Runner Check-In Form and signed waivers for all crew members and the runner. All paperwork must be complete before walking in the door. Be sure to pay your \$20 per car Park Entrance Fee at the Furnace Creek Visitor's Center (and bring proof of same) BEFORE Runner Check-In.

GROUP PHOTO OF ALL ENTRANTS:

1230pm on Sunday, July 10, 2011: This is not mandatory, but all race entrants are encouraged to gather for a group photo by the pool immediately below the Marquez Room at the Furnace Creek Inn.

MANDATORY PRE-RACE MEETING:

Either 200-300PM for 600am Wave, 300-400PM for 800am Wave, or 400-500PM for 1000am Wave on Sunday, July 10, 2011. All runners will attend one of three Pre-Race Meetings in the Marquez Room at the Furnace Creek Inn. The specific meeting is based upon the Wave Start assigned for each runner. Every runner and exactly three crew members (unless a runner only has two crew members) must attend the entire meeting.

MEDIA MEETING:

There will be a brief, mandatory meeting of all journalists after the final Pre-Race Meeting in the auditorium.

ROOKIE (AND VETERAN) CREW TRAINING:

5:00 to 8:00PM, Sunday, July 10, 2011: New to Badwater? No matter how many ultras you've crewed, this informal session will help you with tips and tricks to make sure you, your runner, and the rest of your crew have a great time in Death Valley. We'll cover common mistakes, give an overview of

race rules, and even help with ideas to organize your van and be prepared for almost anything. Hosted by Cory Linkel (7-time crew and 3-time race official at Badwater) and CHP Scott Wall (1-time crew and 6-time race official at Badwater).

SUNRISE / SUNSET:

Civil Twilight (AM): 5:14am, Sunrise: 5:33am
Sunset: 8:12pm, Civil Twilight (PM): 8:41pm.

STARTING TIMES:

6:00AM, 8:00AM, and 10:00AM, Monday, July 11, 2011. Runners may attend only their assigned start time. Runners must check in, ready to race, 30 minutes prior to their start

ENDING TIME:

The event is officially over 48 hours after each starting group, so ALL runners MUST leave the course by either 6:00AM, 8:00AM, or 10:00AM, July 13, 2011.

POST-RACE GET-TOGETHER:

12:00PM, Wednesday, July 13, 2011, Lo-Inyo Elementary School, Multi-Purpose Room, 223 East Locust Street, Lone Pine, CA. (north end of town; east of Hwy 395). Pizza and drinks will be served. No charge for all staff, racers, and up to six crew members with each racer.

PERMITS:

This event is held under permits from the Inyo National Forest, Death Valley National Park, California Department of Transportation, and Inyo County. (If one of them won't issue us a permit, this race is history. So don't screw up!)

COURSE RECORDS:

Men's: Valmir Nunes, 2007, Brazil: 22:51:29.
Women's: Jamie Donaldson, 2010, USA, 26:16:12.

DRIVING DISTANCES:

Las Vegas Airport to Furnace Creek: 140 miles
Los Angeles Airport to Furnace Creek: 250 miles
Lone Pine to Las Vegas Airport: 240 miles
Lone Pine to Los Angeles Airport: 210 miles



Lessons Learned at Badwater

By *Amanda McIntosh*

During the last twenty years of competing as an ultra runner I have heard countless stories about the famous Badwater Ultramarathon, the 135-mile running race held annually in July from Death Valley to Mt. Whitney. Since I don't really like the heat, I have never desired to enter. However, so many runners are passionate about this race across Death Valley, their stories were intriguing, and I was curious.

When my coaching client Doug Ratliff informed me that he had been accepted into Badwater and wanted me to pace and crew for him, it seemed like the perfect opportunity to see what this race was all about.

First I began reading about how people acclimate for the race: Running in a sauna, cycling in a greenhouse, jogging on a treadmill with the clothes dryer vent blowing on you. While Doug didn't do this, he did run in the Texas heat while we (his crew) practiced pacing and crewing. It was unlike any crewing experience I had ever had. I wondered "What could a runner need every half mile?" I was used to doing Mountain Ultras where I saw my crew every 2-3 hours, not every few minutes.

I got my first dose of Badwater reality when I arrived in Furnace Creek two days before the race. When I stepped out of the van, it was like jumping into an oven. The ambient temperature was 120, the wind was hot, and the sun was literally burning my skin. "How was Doug going to run in this, and boy am I glad I'm not," were my first thoughts. I was beginning to understand the need for nearly constant crewing.

Almost immediately we began meeting other racers and crews. It was like any other ultra in that way, with friendly runners and helpful people. But there was more than that: many of these runners had completed multiple



*Chris Kostman and Amanda McIntosh.
Photo by Miriam Airhart*

Badwater races, were back for more, and had only great things to say about the race. Bottom-line, I had never seen a group of runners, crews, and pacers so passionate about a race.

This was one of the only races I have attended where the crew consisted of more world-class runners than the race field itself. The crews were literally a who's who of the running elite: Deena Kastor, Jenn Shelton, and scores of Badwater veterans.

There were a lot of rules! Support vans had to be tagged with the runner's name and number. Crews had to adhere to race and traffic rules. The logistics involved seemed overwhelming.

As the race got underway I saw the need for all the rules. The 80 racers and some 400 crew members traveled across Death Valley like a well choreographed dance. Everyone worked together, runners and crew helping each other.

Just after the race began a woman approached me yelling, "Hey Hammer Girl." (I was wearing my Hammer Nutrition shirt.) It seemed her runner had forgotten his HEED and was wondering if I had any. Our crew van was with Doug and I wasn't sure if we had any HEED to spare. Fortunately we had an extra container so when our crew shift started, we tracked down the needy runner and delivered the HEED to his very appreciative crew.

Pacing Doug was much like pacing at any other ultra, except I had to stay behind, not in front of, him. My job was to keep him moving forward, limiting stops and distractions, while monitoring fluid and fuel intake. We dealt with the usual sleepiness, nausea, and sore feet. There were times that Doug wanted to sit or rest, so I began timing his stops and only allowing him 5 minutes. I kept him motivated by asking him about topics that he enjoyed talking about. Another tactic that worked was asking him to "run to the next marker." The reality is that Doug had a great race and was a joy to pace and crew, even when the temps reached 110 during my 8-hour pacing shift.

Keeping the runner cool was something very new to me. I have been hot enough in races to drop some ice cubes into my hat and jog bra, but Badwater takes cooling to a whole new level. Our

van was stocked with four huge coolers. The "refrigerator" was for those food and drinks which need to stay cool, but were not used frequently. One "coffin" cooler was used just to store about 20 bags of ice. The other coffin cooler was full of drinks, water bottles, plus ice and water to be used for keeping Doug cool. The last was a 7-gallon drink cooler full of ice and water. This cooler was kept sanitary and only an ice scoop was used to put ice in his water bottles, so that no bacteria would get into his drinking water.

Doug used various methods to stay cool. The Moeben hemp wrap was soaked in ice water and worn around his head and shoulders (these were given to each race entrant). He also used the ice bandanas (specially made bandanas that can be filled with ice and tied around the neck), and water spays (industrial or garden sprayers filled with ice water that the crew used to mist him as he passed). All these measures seemed to work well as he never complained about the heat.

Besides the coolers, which took up the majority of the van, we had a tall chest of drawers with everything Doug might need: medical supplies, sunscreen, medications (anti-gas, anti-inflammatory, anti-nausea, etc), Endurolytes, sports lube, powder, foot kit, batteries, lights, etc. There was also a chair and a large umbrella; we had to hide Doug with the umbrella when he needed to change clothes or urinate (there are no bushes to duck behind). We also had two-way radios so the pacer could inform the crew of anything Doug needed before we passed the van again.

We also had a notebook in the van with all of the crew information and a spot to record all of Doug's intake and output (as well as anything else we thought interesting or pertinent). It was nice to be able to look at this and realize that Doug needed something. He typically drank about 20-24 oz of water and took three Endurolytes per hour. He supplemented HEED with various drinks and food throughout the race.

Overall, I was most impressed with all of the organization. Doug had assembled a first class crew, provided us with all of the information we

LESSONS LEARNED AT BADWATER

needed to help him, be where we needed to be, and take care of ourselves. Doug's race was terrific, there were no horror stories, no giant blisters, no endless vomiting. He was even running up the 13 miles to to the Whitney Portal finish line!

Of course the finish line of any event is the highlight and this was no different. Doug crossed the line with all six of us in tow, was greeted by Chris Kostman, the race director, and presented with his buckle, medal, and coveted finisher's shirt.

The race experience wasn't over yet: The post-race awards and party was more of the same: camaraderie, appreciation, and friendship. Runners and crew assembled to applaud the efforts of each one out there. The race recap video was touching! But a couple of amazing things stand out about the results: First, only 7 runners DNF'd. This is one of the most brutal events in the world and yet a huge majority of these runners battle the crazy conditions and make it to the finish line. Second, many of them were finishing more than that once, some up to 15 times. Veteran crew members were also recognized, with two women having crewed ten times each!

When Doug had first approached me about coaching him to get to Badwater, my response was, "I'm happy to work with you through the qualifying events but I am not comfortable coaching you for Badwater itself." I knew Badwater is a special kind of race with a set of circumstances (namely heat) with which I had never dealt before. So, I worked with Doug on his qualifying 100-mile races. For training, he did up to 100 miles per week but was not consistent with his running until he started a running group in San Antonio. The group forced him to be consistent because he was expected to show up for runs.

Because he had crewed at Badwater several times he knew what it would take to finish. He was very organized and had every aspect of his race preplanned, but also had alternate plans in case things did not go well. Another aspect of Doug's success was intense training in the Texas heat with the van and crew just as it would be during the race. This enabled everyone to experience what we would be up

against. Doug tested everything from race fuel to clothing, shoes, and more. He even figured out which shoes he could wear, and when, based on how quickly they dried. Lastly, Doug's participation in a 48-hour event really helped boost his confidence and gave him a taste of how it would feel to be on his feet for that length of time. All of this added up to a great experience for him and his crew. Each of us was ready to take on the Badwater task and Doug had a "picture perfect race" as crewmember Brenda Carawan put it.

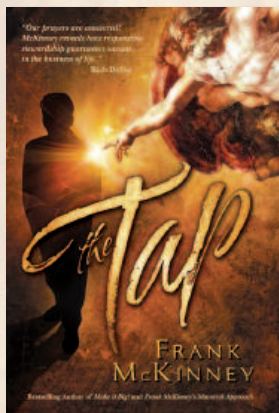
We all spent two days in Las Vegas after the race, lounging and eating (a lot). Doug drove back to San Antonio and began doing short runs the next week. He says the most difficult part of recovery has been sleepiness and being tired. It took him the better part of two weeks to get caught up on rest. His next race is the Arkansas Traveler 100 in October.

While I still contend that this is not a race for me (I have learned "never say never"), I now understand the allure of Badwater. I understand that this group of runners is somehow connected and part of a very special corps of athletes who have not only overcome, but embraced, the climate and adversity of Death Valley.



***Coach Amanda McIntosh** has been a Hammer Nutrition Athlete since 1995. Some of her racing highlights include 1999 50 mile National Women's Champion, 1999 and 2000 Leadville Trail 100 Women's Champion, 2005 World Masters 100K Women's Champion, 2008 Copper Canyon 50-mile Women's Champion, 2007 Q50 Patagonia Women's Champion, and 2010 Q50 Costa Rica Women's Champion. Over the past year Amanda has added cycling and swimming to her running, competing in a few Triathlon and Duathlon events. As a coach she trains beginner to elite runners to accomplish goals from 5k to 100 miles and more. Though Amanda is based in San Antonio, TX, her clients include athletes from all over the world. She thinks Chris Kostman is Da Bomb.*

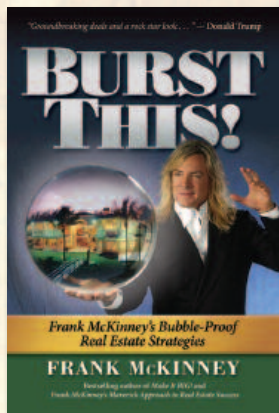
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Frank McKinney (frank-mckinney.com) is a five-time international bestselling author, philanthropist, and extreme risk-taker, best known for his unprecedented success as a real-estate artist and visionary. He sees opportunities and makes markets where none existed before, designing, creating, and ultimately selling some of the most magnificent oceanfront estate homes in the world.

Whether applying his deep, fantastical creativity to these masterpieces or to his first young reader fantasy novel, McKinney consistently defies conventional wisdom to achieve success on his own terms. He is the founder and director of the nonprofit Caring House Project Foundation, which provides homes, schools, orphanages, medical clinics, churches, clean water, and renewable food sources to families in the most underdeveloped nations.



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THE DANGERS OF RUNNING IN THE HEAT

By Jason Hodde, MS, ATC/L

Running in hot weather can pose many dangers to ultrarunners. Although most runners are aware of the dangers of running for prolonged distances in hot and humid weather, many are also inadequately prepared for the intense stress placed on the body during these hot weather runs.

Scott Jurek takes one of many ice baths in 2006.

In July 2002, I participated in the 25th anniversary of the Badwater Ultramarathon, a 135-mile trek from the lowest place in the continental United States (Badwater Basin), through Death Valley National Park, and to the foot of Mount Whitney, the Whitney Portals, at an altitude of 8,360 feet (2,548 meters). The run was held in the middle of one of the most severe heat waves southern California has ever seen. In preparation for the run, I made sure my crew was aware of the signs and symptoms of heat illness, as well as how to treat me should problems occur. Here are some of the dangers of ultrarunning in the heat, and preventative measures that can be taken to avoid potential problems.

The Heat Index

The heat index is the apparent temperature felt by the body due to the combined effects of actual temperature and humidity. Most people understand that as the air temperature goes up, so does the heat index, but humidity also plays a role. As the humidity rises, the body is unable to efficiently evaporate the sweat it produces. Therefore, the perceived temperature is much higher than the actual air temperature. The loss of cooling efficiency thus makes exercise extremely dangerous.

Although it is convenient to use a single number to describe the apparent temperature your body feels, keep in mind that heat and

humidity affect everybody differently. Several assumptions are made to calculate the heat index measurements in the table below. Specifically, the heat index assumes the body to be:

- 5' 7" (170 cm) in height
- 147 pounds (67 kg) in weight
- Caucasian
- At 98.6° F (37° C) body temperature
- Clothed in long pants and a short-sleeved shirt
- In shade
- Walking at a speed of 3.1 mph (5 kph)
- In a breeze of 6 mph (10 kph)
- Not dripping with sweat

Changing any of these factors can either increase or decrease the heat index from those shown in the table. Be aware that heat index values of over 100 significantly increase your risk of heat-related illness.

	Air Temperature (Degrees F)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Heat Index										
0%	64	69	73	78	83	87	91	95	99	103	107
10%	65	70	75	80	85	90	95	100	105	111	116
20%	66	72	77	82	87	93	99	105	112	120	130
30%	67	73	78	84	90	96	104	113	123	135	148
40%	68	74	79	86	93	101	110	123	137	151	
50%	69	75	81	88	96	107	120	135	150		
60%	70	76	82	90	100	114	132	149			
70%	70	77	85	93	106	124	144				
80%	71	78	86	97	113	136	157				
90%	71	79	88	102	122	150	170				
100%	72	80	91	108	133	166					

Data from the US National Weather Service

Heat Illnesses

There are three major heat illnesses—and all of them can be exacerbated by ultra distance running and prematurely end an ultrarunner's race. In all cases, the main reason that runners experience heat illness is dehydration. If you replace lost fluids and electrolytes and are able to train your body to process a high volume of fluid in a short period of time, you significantly decrease the risk of experiencing these race-ending medical emergencies.

Heat cramps: Exercising in hot weather can lead to muscle cramps, especially in the legs. This is usually caused by imbalances or deficiencies in your body's electrolyte stores. A cramp is characterized by sharp, stabbing pain in the muscle and rarely works itself out on its own. On a training run earlier this year in Death Valley, many runners complained of cramps in their legs; I suffered from cramps in my diaphragm and had difficulty breathing for more than an hour! Cramps become less frequent with heat training, but for those of us unaccustomed to such extreme conditions, maintaining adequate hydration and electrolyte balance is critical to avoiding them. To eradicate cramps, you should stop running, drink fluids containing electrolytes, cool your body with wet towels, and immediately get out of the sun.

Heat exhaustion: Losing fluid and electrolytes through sweat leads to dizziness and weakness if the lost fluids are not replaced. Heat exhaustion is characterized by a moderate rise in body temperature, dizziness, nausea and vomiting, and a headache. You might also experience weakness, lack of coordination, heat cramps, heavier than usual sweating accompanied by moist and cold skin, and "goose bumps." Your heart rate may rise and you won't be able to run as fast due to fatigue. Many runners—even those who are well trained—will suffer from mild heat exhaustion after running for several hours in hot and humid conditions. If you experience the signs of heat exhaustion, stop running immediately and drink fluids containing electrolytes, cool your body with wet towels, lie down and elevate your feet a few inches above your heart, and immediately get out of the sun.

Since heat exhaustion can lead to the most severe form of heat-related illness, heat stroke, seeking prompt medical attention for heat exhaustion is also highly recommended.

Heatstroke: In extreme cases heat can upset the body's thermostat, causing body temperature to rise to 105 degrees F or higher. This is a life-threatening situation that requires immediate medical attention. While it is common for untreated heat exhaustion to rapidly progress to heatstroke, heatstroke can (and does) occur without the signs of heat exhaustion being apparent. Symptoms of heatstroke include lethargy and extreme weakness, confusion and odd or bizarre behavior, disorientation and unconsciousness. Because heatstroke is a complete failure of the body's temperature regulation system, sweating ceases and the skin becomes hot and dry. Convulsions or seizures can occur as the brain begins to shut down. Coma and death are also possible in extreme cases. Heatstroke is a medical emergency that requires immediate medical attention. Call the emergency response system immediately! Get the runner out of the sun, remove all clothing, and immediately rub their body with ice or immerse the runner in cold water.

By staying properly hydrated and recognizing the early warning signs of heat illness, as a runner you can prevent a heat-related problem from becoming a life-threatening situation. As a volunteer, recognizing these heat-related dangers may one day help you save the life of a runner who has underestimated the intensity of the surroundings.



About the Author:

Jay is a nationally Certified Athletic Trainer (ATC) licensed to practice in Indiana. He holds Master's degrees in Exercise Physiology and the Basic Medical Sciences, both from Purdue, with an emphasis on tissue repair and healing. Jay works full-time as the Clinical Affairs Manager for Cook Biotech Incorporated, a medical device company in Indiana. He has completed over 60 ultramarathons, including the Grand Slam of Ultrarunning and the 2006 Badwater Ultramarathon.



2007 men's champion and record-breaker Valmir Nunes gets help with staying cool.

THE DANGERS OF HOT WEATHER RUNNING

DEHYDRATION, HEAT CRAMPS, HEAT EXHAUSTION, HEATSTROKE & HYPONATREMIA

By Claudio Piepenburg

(Originally published by Road Runner Sports)

Running in hot weather can pose dangers to runners. Particularly dangerous is racing in hot, humid summer conditions. Here's how to protect yourself from these five serious (and potentially fatal) conditions.

Dehydration

Dehydration is not limited only to the summer months, although it's probably more likely to occur during that time. Many physicians believe that most people are in a constant state of dehydration. Since coffee, tea, soda and alcohol act as a diuretic, anyone who drinks these fluids on a daily basis, and doesn't drink at least an equal amount of water, will probably be dehydrated. If the person is physically active, the potential for dehydration is even greater.

Working out in hot, humid conditions promotes sweating, which in turn can cause dehydration. Sweating is good for you because it cools your body, but when you lose too much water you become dehydrated. If you're already slightly dehydrated, sweating will only

make it worse. It's important to maintain an adequate fluid intake all the time. Don't expect that you can make up for several days of not drinking enough by downing two cups of sports drink before your next long run or race. It's important to keep hydrated all the time. Once you start to feel thirsty, it's too late.

The average (sedentary) person needs a minimum of eight 8-ounce glasses of fluid a day. Runners need more: anywhere from four to eight quarts of fluid. That translates to at least sixteen 8-ounce glasses daily. Remember that diuretics don't count! Drink water and sports drinks, and if you don't have to worry about calories, fruit drinks or juice.

Two hours before your daily summer workout or a race, you should drink 16 ounces of fluid. Then ten minutes or so before you start to run, drink another one or two cups of water or sports drink. Drinking early and drinking often is the key. During a race you should drink six to twelve ounces of fluid every 15-20 minutes. If the weather is very hot, you may

need to drink even more. Training in warm weather, you should drink at least every 35 to 40 minutes. (Remember you will have already had two 8-ounce glasses before you started.) If you're running a race shorter than 30 minutes, you probably won't need any water other than what you drank before the start. The same goes for the last few miles of a longer race. If you're racing or training for longer than an hour, drink sports drinks as opposed to strictly water.

Start drinking immediately after finishing a run, no matter if it was a race or a workout. Minimum is 16 ounces for every 30 minutes you ran. If you tend to sweat a lot, you'll need more. Weigh yourself after you've run. Drink at least 16 ounces of fluid for every pound you lose through sweating.

By monitoring the color of your urine you can tell if you're hydrated. It should be pale yellow or even clear. If it isn't, you need to drink more fluids. It's important that you retain the fluid, so be careful if you're urinating every fifteen or twenty minutes. To restore your fluid balance, eat something salty (a bag of pretzels, salted nuts, crackers or potato chips), then drink a sports drink. The salt will make you thirstier, so you'll take in even more fluid and urine production will decrease.

Heat Cramps

Have you ever seen a runner bent over at the side of the road massaging their calves during a race? Chances are that he or she had heat cramps. Heat cramps are very painful (envision someone stabbing a knife deep into your muscles!) and rarely "work themselves out". The cramps occur because you've lost minerals through sweating and dehydration. Once you've reached the point of heat cramps, it's too late to try to replace fluids on the run. To make the cramps go away you should:

- Stop running
- Drink fluids immediately. The fluids should include sports drinks as well as water
- Massage the muscles once the pain begins to subside
- Cool your body with wet towels
- Get out of the sun

Heat Exhaustion

Heat exhaustion is a very serious condition that can lead to heatstroke. The symptoms of heat exhaustion are:

- Dizziness
- "Goose bumps" (particularly on the torso and arms)
- Nausea (sometimes accompanied by vomiting)
- Moderate to severe headache
- Weak legs
- Lack of coordination
- Rapid pulse
- Heavy sweating often accompanied by moist and cold skin
- Muscle cramping

If you experience any of these symptoms you must:

- Stop running immediately
- Get medical attention
- Drink large amounts of fluids, including sports drinks
- Get out of the sun
- Lie down and elevate your feet above your heart
- Loosen your clothing

Heatstroke

Heatstroke can be fatal. Unfortunately runners will sometimes ignore the symptoms of heat exhaustion (particularly in races longer than 10K) and will continue to push themselves until they're nearing a total thermoregulatory breakdown. The symptoms of heatstroke are very similar to those of heat exhaustion, but rapidly progress to:

- Disorientation
- Weakness in the legs to the point that the runner may fall
- Strange behavior (including flailing with the arms and shoving)
- "Fuzzy" thinking
- Rapid pulse
- Cessation of sweating and hot/dry skin
- Body temperature that may reach 104 degrees or higher
- Lack of consciousness
- Convulsions or seizures
- Coma



Noora Alidina receives fluids for inside and out during the 2007 race from her husband and daughter.

Someone suffering from heatstroke needs immediate medical attention. They should be moved out of the sun, cooled by either rubbing their body with ice or immersing them in cold water and given fluids intravenously.

Hyponatremia

Within the last few years the condition known as hyponatremia has begun to attract the attention of sports medicine physicians, exercise physiologists, and the medical directors at some of the larger marathons around the country. Hyponatremia has been called water intoxication because of the symptoms it produces. According to Dr. Tim Noakes, Professor of Exercise & Sports Science Director at the University of Cape Town, "...a person with hyponatremia looks like he or she is mildly drunk. They can't concentrate normally...they forget what you were talking about and start to concentrate elsewhere."

Hyponatremia occurs when the body becomes dangerously low in sodium. It's caused when you literally take in too much water. Although scientists have known about it for a long time, it has only been in the last few years as more runners have been competing in marathons that it has become a concern. According to Dr. Noakes, fluid has to be ingested at high levels for several hours for hyponatremia to occur. He suggests that a runner would have to be drinking water regularly for at least four to six hours to develop the condition. So runners taking four to six hours or more to run a marathon are at particular risk.

Unfortunately, symptoms of hyponatremia tend to mimic those of severe dehydration and/or heat exhaustion. By giving the athlete more water to drink the hyponatremia becomes worse, as more and more sodium is flushed out of the system. If a runner with hyponatremia is given fluids intravenously, they can suffer a

fatal reaction. Dr. Noakes and other sports medicine professionals recommend that physicians and other medical personnel at road races be alert for the signs of hyponatremia. One of the earliest symptoms is a craving for salty food.

Although hyponatremia is rare, it's wise to be aware that it can occur, particularly if you're running a marathon in unusually hot weather. Hyponatremia serves as a reminder that water is good, but don't forget sports drinks, which replenish your body with the sodium, potassium and other trace minerals you lose through sweat. It's worth repeating: if you're going to be running (or racing) for longer than an hour, you should be drinking a sports drink as well as water.

About the author:

Claudia Piepenburg has been running for 21 years and is the current editor for Peak Run Performance. She holds or has held state age-group records in Michigan, North Carolina, Florida, Tennessee and Virginia. In 1990, she was ranked 18th fastest masters woman in the world and 8th fastest masters woman in the U.S. in 1990 and 1991. She competed in the 1988 Olympic Marathon Trials, was 20th woman overall in the 1987 Boston Marathon and women's winner of the 1986 Virginia Beach Marathon. If you have questions or comments for Claudia, she can be reached at cpiepe@roadrunnersports.com.



MEDICAL RISKS IN THE BADWATER ULTRAMARATHON

This 135 mile race is probably the most physically taxing competitive event in the world. It also has considerable medical risks. All runners and crews must appreciate these two facts both before and during the race.

Heat illness and heat stroke are serious risks. These can cause death, renal shutdown, and brain damage. It is important that runners and crews be aware of the symptoms of impending heat illness. These include: nausea, vomiting, headache, dizziness, faintness, irritability, lassitude, weakness, and rapid heart rate. Impending heat stroke may be signaled by a decrease in sweating and

goose bumps, especially over the chest.

Heat stroke may progress from minimal symptoms to complete collapse in a very short period of time. Deaths and renal shutdown (kidney failure) have been reported in other ultra-marathons. Adequate conditioning is mandatory.

Adequate fluid and electrolyte intake is the most important preventative for heat illness. Runners may well require dozens of gallons of fluid during this race. Proper pace is crucial.

The high altitude plus exertion can also produce various degrees of altitude sickness. This can lead to severe lung and brain swelling, and even death. The main treatment is rest,

and especially to get to a lower altitude.

Blisters are also a problem on this course, with pavement temperatures perhaps reaching 200 degrees. Proper foot care & preparation are essential for having a successful race.

Remember, you are responsible for your well-being while participating in this race. There are no aid stations. Know where your limits are and know your body. Your acceptance of invitation to this race declares that you are aware of the risks & potential health problems.



FINISHER DATA ANALYSIS: BADWATER ULTRAMARATHON, 1990-2010

Year	Starters	Finishers	Buckle Cut-Off	Sub 60hr	Sub 48hr	Sub 40hr	Sub 34hr	New M Rec?	New F Rec?
2010	80	73	48 hours	91%	83%	51%	19%		26:16:12
2009	86	75	48 hours	87%	77%	47%	24%		
2yr avg	83	74		89%	80%	49%	22%		
2008	82	75	48 hours	91%	83%	37%	10%		26:51:33
2007	84	78	48 hours	93%	77%	47%	18%	22:51:29	
2006	85	67	48 hours	79%	62%	24%	13%		
2005	81	67	48 hours	83%	56%	22%	7%	24:36:08	
2004	72	57	48 hours	79%	58%	28%	8%		
5yr avg	80.8	68.8		85%	67%	32%	11%		
2003	73	46	48 hours	63%	42%	14%	5%		
2002	78	58	48 hours	74%	47%	12%	4%		27:56:47
2001	71	55	48 hours	77%	46%	14%	7%		
2000	69	49	48 hours	71%	41%	16%	12%	25:09:05	29:48:27
1999	42	33	48 hours	78%	60%	26%	12%	27:49:00	36:58:00
5yr avg	66.6	48.2		73%	47%	16%	8%		
1998	29	20	48 hours	69%	41%	17%	10%	28:09:00	
1997	27	20	48 hours	74%	44%	26%	3%	29:10:00	37:01:00
1996	23	14	45 hours	61%	35%	1%	4%	33:01:00	41:13:00
1995	24	16	45 hours	67%	38%	13%	0%		
1994	25	16	45 hours	64%	32%	1%	4%		
5yr avg	25.6	17.2		67%	38%	12%	4%		
1993	12	10	60 hours	83%	50%	25%	17%		
1992	14	13	60 hours	92%	29%	14%	14%		
1991	14	14	60 hours	100%	71%	36%	14%		
1990	21	17	70 hours	81%	29%	29%	14%		
4yr avg	15.25	13.5		89%	45%	26%	15%		

Notes in Chronological Order

1987 through 1989: Data was not included because it is incomplete and because the route was 11 miles longer than the route used from 1990 through the present.

1990 through 1995: The race began in the evening (a "PM Start"), which is, by all accounts, faster. Thus course records are not noted above.

1999: The feature length documentary film "Running on the Sun" was filmed, creating a larger field than ever before and, we would argue, a higher than average "drive to succeed" due to the plethora of cameras on the course.

2000 to the present: The field became much more international and thus significantly faster and more competitive than previous years. In 2000, the highest placed American was in sixth place, five hours behind the winner. Since then only in 2007 has a non-American won.

2002 and 2003: Pam Reed, a female, won the race overall.

2003: This year, even by Badwater standards, was "extra hot." Thus the finishing and bucking cut-off averages dipped, rather than rose, that year. Interestingly, the sub-40 and the sub-34 hour averages rose, so apparently the very top competitors were not negatively affected by the heat.



Helping hands for Jamie Donaldson.

**GOOD LUCK
TO ALL OF THE
BADWATER
ULTRAMARATHONERS!**

Go, Tim Neckar!



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Mother Nature's Greatest Sports Arena: Death Valley National Park



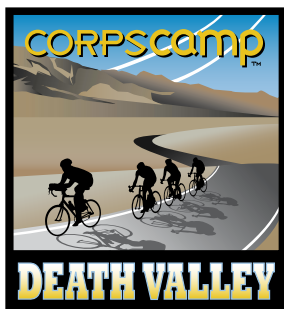
The Fall edition of our Death Valley Century, Ultra Century, and Double Century is held annually in October, providing incredible, one-of-a-kind, 108-, 144- and 197-mile cycling routes to Scotty's Castle, Ubehebe Crater, and Hell's Gate. Limit 400 riders.

October 29, 2011



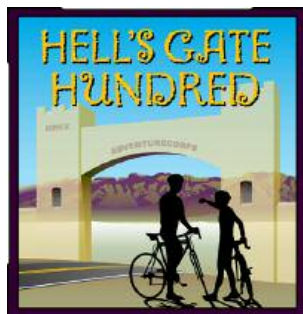
The Spring Edition of our Death Valley Century, Ultra Century, and Double Century is held annually in March, providing incredible, one-of-a-kind, 105-, 150-, and 196-mile cycling routes past Badwater and over the passes to Shoshone and back. Limit 400 riders.

March 3, 2012



Our cycling lifestyle camp features five days and 300 or more (or less) miles of epic, one-of-a-kind cycling, plus daily yoga classes, group dinners, and a hike, and then concludes with participation in our Hell's Gate Hundred cycling century. Limit 75 riders.

March 27-31, 2012



Hell's Gate Hundred includes locations and sights that are not visited in any other one-day cycling event, including Artist Drive, Daylight Pass, and the ghost town of Rhyolite. The 100-mile route features 8500 feet of elevation gain, while a 65-mile version is also offered.

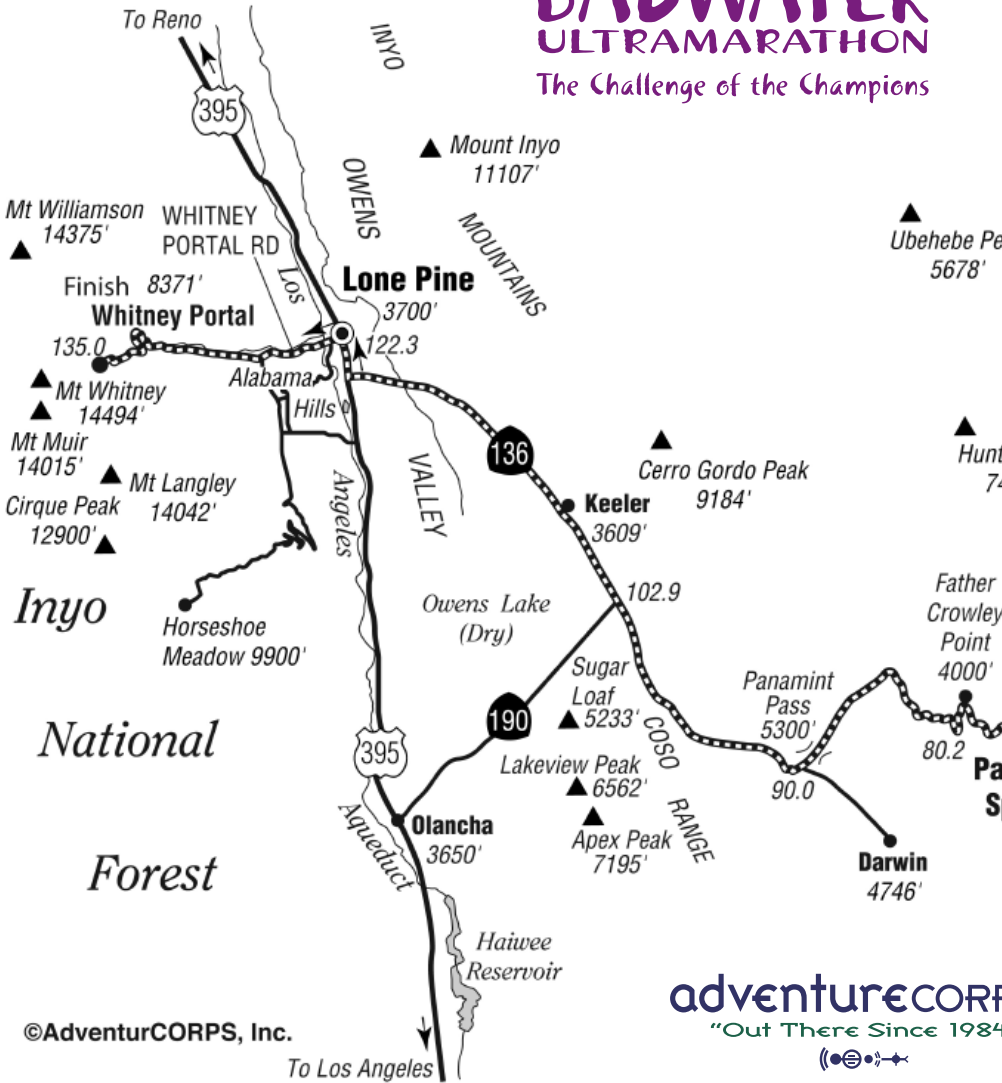
March 31, 2012

For information, registration, and much more, visit www.adventurecorps.com

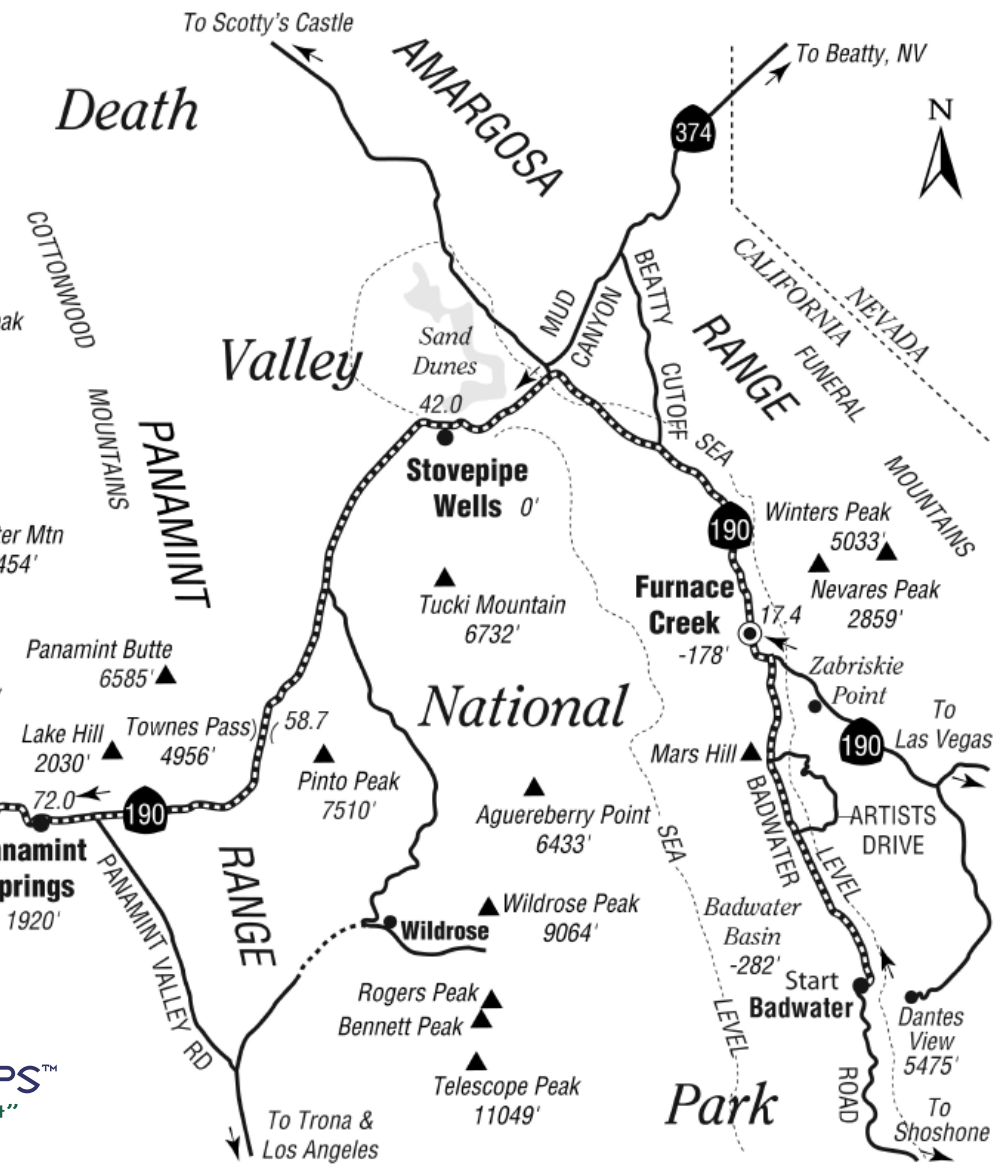


BADWATER ULTRAMARATHON

The Challenge of the Champions



“Please, no groveling or whining. Treat your crew (and race staff). A tired and pissed off crew/pacer will never enhance your effort. Responsibility is to stand tall and silently deal with the pain, man who filled out the race application.”



ff) with due respect. They deserve tons of thanks for their volunteered time. Their responsibility is to pamper and prod you through the event. Your misery and suffering and to finish the race. Don't forget you were the one

— Arthur Webb, 12-time official finisher

OFFICIAL RACE ROUTE

OFFICIAL RACE ROUTE

<i>Landmark</i>	<i>Distance (mi.)</i>	<i>Elevation (ft.)</i>	
Badwater	0	-282	
Telescope Peak Sign on L.	1.8	-200	
Wide Shoulder on R.	3.1	-200	
Natural Bridge on R.	3.5	-170	
Devil's Golf Course on L.	5.5	-165	
Artist's Drive entry on R.	7.9	-165	
West Side Road on L.	10.5		
Artist's Drive exit on R.	11.6	-70	
Mushroom Rock on R.	12.9	-170	
Golden Canyon on R.	14.4	-165	
Hwy 190 & 178 – Go Left	16.4	0	
Furnace Creek Ranch on L.	17.4	-165	First Time Station on Left after entrance
Chevron Gas and ice on L.	17.6	-165	
Visitor's Center on L.	17.7	-170	
Harmony Borax Works on L.	19.0	-170	
Cow Creek on R.	20.7	-170	
1st Marathon	26.2	-170	
Beatty, NV turnoff on R.	28.3	-165	
Salt Creek turnoff on L.	30.7	-165	
Sea Level Sign on L.	31.9	0	
Scotty's Castle turnoff on R.	34.7	-130	
Sea Level Sign on L.	35.2	0	
Sand Dunes turnoff on R.	35.8	0	
Devil's Cornfield sign on R.	36.1	-80	
Sand Dunes on R.	39.9	0	
Stovepipe Wells Village	41.9	0	Second Time Station / Medical on Left by Hotel Courtyard
Mosaic Canyon turnoff on L.	42.1	5	
1000' elevation sign	46.6	1000	
2000' elevation sign	50.5	2000	
Wild Rose turnoff on L.	51.0	2500	
2nd Marathon	52.4	2800	
3000' elevation sign on L	53.3	3000	
4000' elevation sign on L.	55.7	4000	
2nd Radiator Water Tank on R.	58.5	4900	
Towne Pass summit	58.7	4965	
4000' elevation sign on R.	61.5	4000	
Vista Point (view of Whitney)	62.2	3500	
3000' elevation sign on L.	63.8	3000	
2000' elevation sign on L.	66.1	2000	

Continued...

Landmark	Distance (mi.)	Elevation (ft.)	
Adopt-a-Highway sign on R	67.7	1800	
Panamint lake bed, east edge	68.1	1640	
Panamint lake bed, west edge	69.1	1640	
Trona turnoff on L.	69.8	1750	
Panamint Springs Resort	72.3	1970	Third Time Station on Left at Resort
2000' elevation sign on L.	72.9	2000	
Darwin Falls turnoff	73.3	2500	Dangerous, narrow area! - miles 74 to 81*
3000' elevation sign on L.	75.8	3000	
3rd Marathon	78.6	3400	
4000' elevation sign on L.	80.2	4000	
Father Crowley's Point on R.	80.2	4000	
DVNP Park Boundary	84.9	4200	
Saline Valley turnoff on R.	86.0	4800	
5000' elevation sign	87.0	5000	
Darwin turnoff on L	90.1	5050	Fourth Time Station on Left at turnoff
5000' elevation sign on L.	92.4	5000	
Grave Site on R.	96.3	4100	
27.5 mile post marker	100.0	4050	
4000' elevation sign on L.	101.6	4000	
Hwy 136 & 190 – go straight	102.9	3935	
4th Marathon	104.8	3800	
Keeler	107.8	3610	
Adopt-a-Highway sign on R.	108.5	3605	
Dolomite loop turnoff on R.	112.6	3600	
Dolomite loop turnoff on R.	116.9	3610	
Owen's River	117.7	3610	
Junction Hwy 136 & Hwy 395 - Go Right	120.3	3695	
Dow Villa Hotel on Right	122.3	3610	Fifth Time Station / Medical on Right at Dow Villa
Portal Road light – go Left	122.4	3610	
Tuttle Creek turnoff on L.	122.9	3770	
LA Aqueduct	123.0	3855	
Lone Pine Creek	124.1	4200	
Movie Flat Road on R.	125.1	4590	
Lone Pine Creek	125.3	4800	
Horseshoe Meadow on L.	125.5	5000	
Cuffe Ranch turnoff on R.	126.7	5100	

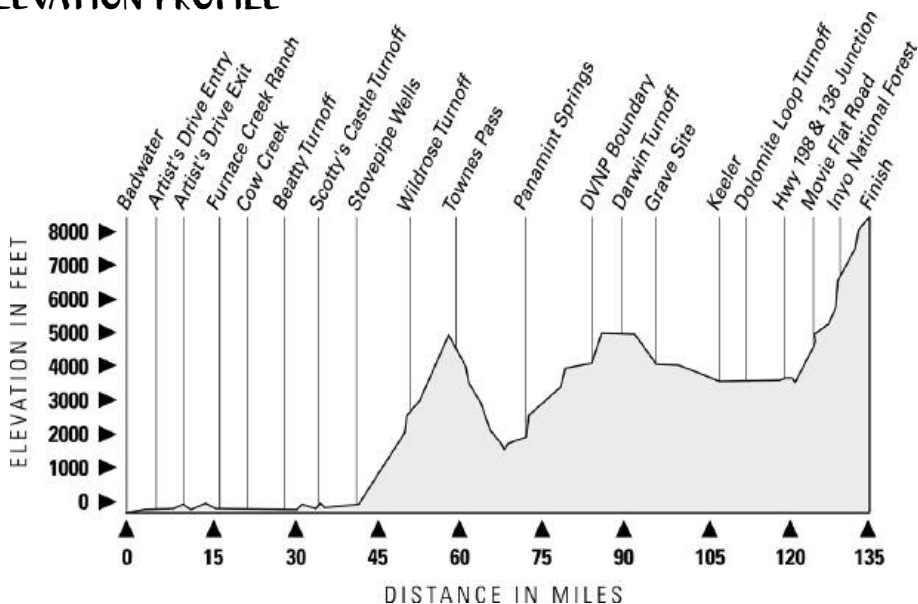
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OFFICIAL RACE ROUTE

Landmark	Distance (mi.)	Elevation (ft.)
Olivas Ranch turnoff on L.	128.0	5300
Lone Pine Campground on L. 129.0		5700
		Dangerous, narrow area! - miles 129 -135*
Lone Pine Creek	129.2	6000
Inyo Nat. Forest sign on R.	129.5	6400
Large pullout on R.	130.8	6890
5th Marathon	131.0	7000
Switchback to left	131.7	7215
Vista Point	132.4	7400
"Campsites 39-44" sign on R	133.3	7700
Meysan Lakes trailhead on L.	133.5	8035
Family Campsites	133.7	8100
Overflow Parking	134.3	8200
Finish	134.4	8360

Official distance is 135.0 miles. Remember all car odometers have error. Distances above are accurate in a relative sense, but you may find variation in the overall distance, as we did when creating the above routesheet.

ELEVATION PROFILE



COURSE DESCRIPTION

Badwater, Death Valley

The race begins here adjacent to a pool of salt-water located at the lowest place in the Western Hemisphere.

Furnace Creek Ranch, Mile 17.4

The first oasis in our journey. A gas station, small general store, hotel, restaurant, camping, and ice machine are available.

Stovepipe Wells, Mile 41.9

A small market, gas station, restaurant and motel. This is not open 24 hours.

Towne Pass (4956'), Mile 58.7

Long ascent, then long descent, followed by approx. 12 long straight miles. It's a steep and narrow road with limited opportunities to park. Support vehicles, crews, and runners must be cautious and extra aware of the traffic.

Panamint Springs Resort, Mile 72.3

Restaurant, gas station, and motel with limited hours. A long, steep climb follows on a steep and narrow road with limited opportunities to park. Support vehicles, crews, and runners must be cautious and extra aware of the traffic.

Father Crowley's Turnout, Mile 80.2

This isn't the top. The road continues to rise to 5000' over rolling hills, then eventually descends into the Owen's Valley.

Keeler, Mile 107.8

A small mining town with no facilities.

Lone Pine, Whitney Portal Road, Mile 122.2

Lone Pine offers the weary runner and crew all the amenities of a real town: fast food, pizza, restaurants, motels, gas stations, grocery stores, and more, not to mention our Webcast Headquarters. Restock here for the climb to the portals. Turn left onto the Whitney Portal Road to begin the final leg, the longest and steepest climb of the race. Temperatures will steadily

decrease. Be prepared with extra layers of clothing and rain gear the final few miles. Be sure your support vehicle is completely off of the road and that you do not block traffic.

Mt. Whitney Trailhead, (8360'), Mile 135

Congratulations! You have finished the most extreme running race in the world! A small diner/shop are open daylight hours. There is also a stocked fishing pond and a campground.



Don't make CHP Scott call "AAA"!



adventureCORPS
The Out There™
2009

The Death Valley Cup recognizes those athletes who complete both the Badwater Ultramarathon 135 Mile Running Race and the Furnace Creek 508 Mile Bicycle Race in the same calendar year. To earn this recognition is a very significant achievement in endurance sports and especially for those athletes who have come to know and love Death Valley and its environs.

For more information about Furnace Creek 508, visit:

www.the508.com

Current Death Valley Cup Record Holders

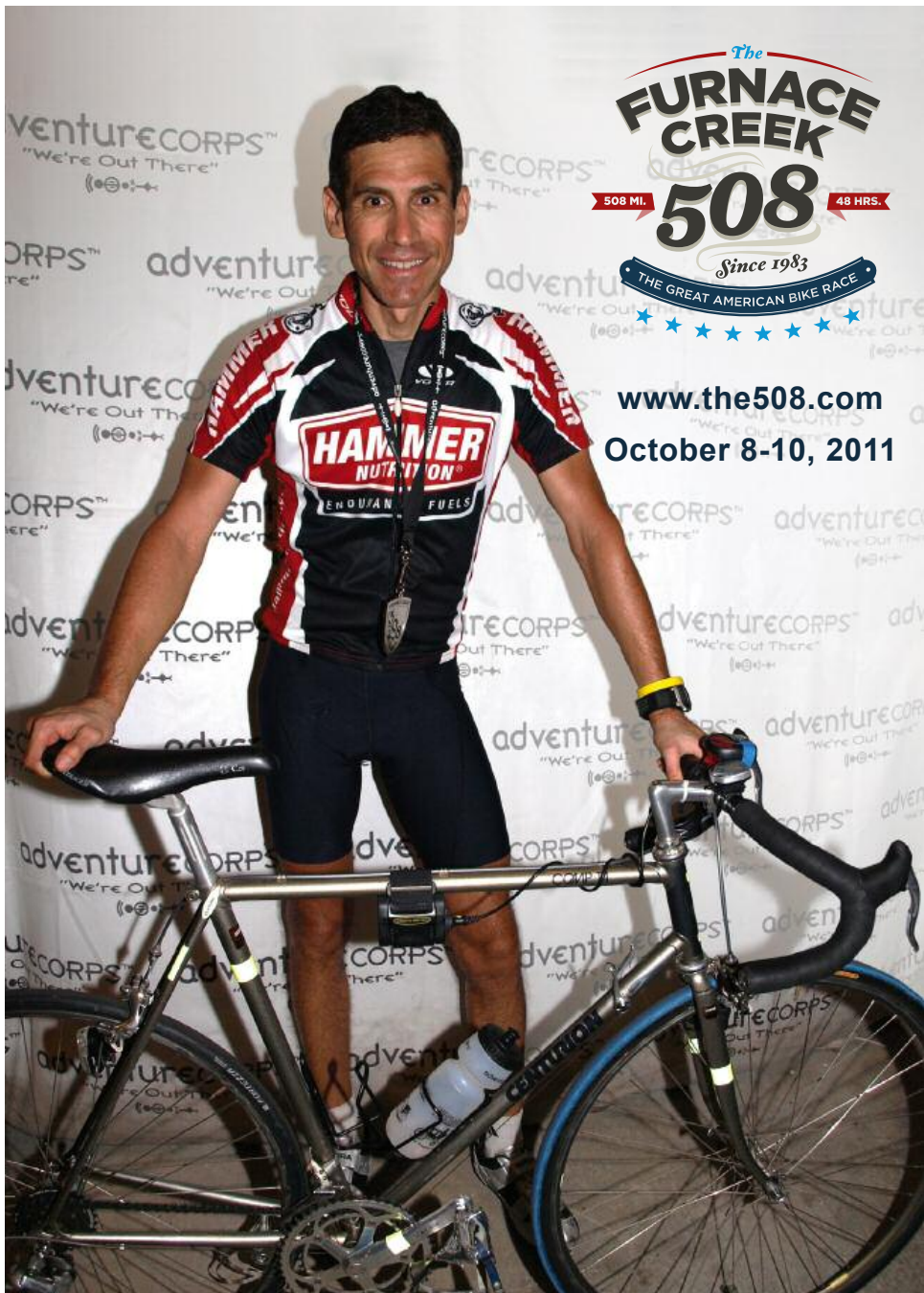
Athletes	Yr	Badwater	FC 508	Total Time
Charlie Engle, "Water Dragon" Greensboro, NC, 47 (2nd DV Cup)	2009	25:45:11, 4th place	33:19:25, 4th place	59:04:36
Shanna Armstrong "Dik Dik" Lubbock, TX, 34	2008	31:16:10, 3rd female, 7th overall	4:30:58, 5th female, 24th overall	65:47:08



Death Valley Cup Finishers, in order of fastest to least fast

Athletes	Yr	Badwater	FC508	Time
Kaname Sakurai, "Sea Lion" Nagoya, Japan, 36	2000	27:52:14, 3rd place	32:31:56, 2nd place	60:24:10*
Charlie Engle, "Water Dragon" Greensboro, NC, 44	2007	27:42:32, 5th place	34:31:12, 13th place	62:13:44
Danny Westergaard, "Wiener Dog" Rolling Hills, CA, 48	2007	32:22:58, 12th place	35:51:38, 19th place	68:14:36
Monica Fernandez, "Quetzal" Casablanca, Morocco, 40 (Guatemala)	2008	35:17:59, 7th female, 12th overall	32:58:12, 2nd female, 12th overall	68:16:11
Patrick Candé, "Golden Eagle" Tahiti, French Polynesia, 48	2005	34:13:21, 7th place	36:52:12, 37th place	71:05:33
Danny Westergaard, "Wiener Dog" Rolling Hills, CA, 49 (2nd DV Cup)	2008	36:31:46, 17th place	34:38:34, 23rd place place	71:10:20
Marshall Ulrich, "Unicorn" Ft. Morgan, CO, 43	1996	33:01, 1st place	38:32:45, 16th place	71:33:45
Nickademus Hollon, "Horned Lizard" San Diego, CA, 20 (2nd DV Cup)	2010	31:53:00, 13th place	39:53:28, 21st place	71:46:28
Monica Scholz, "Scarlett Fairy Cup" Jerseyville, Ontario, Canada, 39(2nd DV Cup)	2006	32:07:01, 1st female, 8th overall	40:00:02, 2nd female, 27th overall	72:07:01
Jean Michel Monot, "Manta Ray" Tahiti, French Polynesia, 45	2005	36:51:12, 11th place	35:53:48, 31st place	72:45:00
Monica Scholz, "Scarlett Fairy Cup" Jerseyville, ON, Canada, 37	2004	29:22:29, 1st female, 3rd overall	44:29:15, 1st female, 25th overall	73:51:44
Danny Westergaard, "Wiener Dog" Rolling Hills, CA, 50 (3rd DV Cup)	2009	35:51:24, 28th place	39:54:25, 14th place	75:45:49
Nickademus Hollon, "Horned Lizard" San Diego, CA, 19	2009	33:21:29, 18th place	44:06:44, 24th place	77:28:13
Michele Santilhano, "Shongololo" Menlo Park, CA, 38 (South Africa)	2008	39:42:23, 11th female, 29th overall	38:01:42, 7th female, 42nd overall	77:44:05
Danny Westergaard, "Wiener Dog" Rolling Hills, CA, 51 (4th DV Cup)	2010	37:13:19, 30th place	40:32:17, 23rd place	77:45:36
Steve Teal, "Desert Duck" Phelan, CA, 42 (3rd DV Cup)	2007	44:16:27, 50th place	34:16:04, 11th place	78:32:31
Tim Hewitt, "Muskox" Greensburg, PA, 56	2010	36:30:52, 26th place	42:11:07, 32nd place	78:41:59
Steve Teal, "Desert Duck" Phelan, CA, 45 (5th DV Cup)	2010	42:15:49, 47th place	37:15:00, 16th place	79:30:49
Steve Teal, "Desert Duck" Phelan, CA, 40	2005	43:56:20, 34th place	35:39:52, 29th place	79:46:12
Steve Teal, "Desert Duck" Phelan, CA, 43 (4th DV Cup)	2008	45:24:20, 56th place	35:12:55, 26th place	80:37:15
Angelika Castaneda, "Cat" San Diego, CA, 56	1999	36:58, 1st female, 8th overall	43:46:40, 3rd female, 18th overall	80:44:40*
Steve Teal, "Desert Duck" Phelan, CA, 41 (2nd DV Cup)	2006	42:29:16, 32nd place	41:24:06, 29th place	83:53:22
David Jackson, "Jackass" Lexington, KY, 43	2002	47:12:30, 25th place	38:56:12, 15th place	86:08:42
Del Scharffenberg, "Spider" Portland, OR, 52	1997	48:16, 13th place	42:15:26, 10th place	90:31:26
Charlie Liskey, "Lizard" Somis, CA, 40	1996	58:26, 14th place	39:32:08, 17th place	97:58:08

(*To receive the Death Valley Cup plaque, these combined record times must be broken.)



Jim "Gyrfalcon" Swarzman: February 27, 1964 - April 10, 2011

Above: Jim at the 2010 Furnace Creek 508 finish line, after completing the 508-mile race in 38:57:50 in the Classic Bike Division. He was killed by a hit-and-run driver during the San Diego 600km Brevet this year. An incredible athlete and cyclist, Jim is one of the nicest, friendliest, most life-loving people we have ever known. More about Jim on our blog: www.xo-1.org

OFFICIAL RULES

General Race Rules

1. There are three starting times for the 2011 Badwater Ultramarathon (6am, 8am, and 10am on July 11, 2011), but all racers in all groups are competing in the same race. Runners may attend only their assigned start time. Runners must check in at the start line, ready to race, 30 minutes prior to their start time. Starting Groups are assigned by the race director and are non-transferable. Split times will be collated throughout the race to maintain overall standings. There are only two divisions: men's and women's. The racer to arrive at the finish line in each division with the lowest overall time, based on their starting time, will be considered the winner.

2. The race number must be worn on the front of the body, unmodified, unfolded, and visible at all times during the race. It may not be worn on the head or hat.

3. The clock does not stop for any reason until the race course officially closes 48 hours after each designated official start time. All racers must leave the course by the 48th hour beyond their start time: Finishing, or remaining on the race course with the intent to continue, is not allowed after 48 hours.

4. All runners must have passed, and be proceeding forward, beyond the following locations within the specified time cut-offs:

- Stovepipe Wells: within 12 hours of their respective start time (STRONGLY ENCOURAGED).
- Panamint Springs Resort: within 28 hours of their respective start time (MANDATORY).

Note: Failure to pass Panamint Springs Resort within the specified 28 hour time cut-off will result in disqualification. Runners MAY NOT continue under human power, officially or unofficially, unless they have continued beyond the Panamint Springs time station within 28 hours of their starting time.

Additionally, beyond Panamint Springs Resort, if it becomes clear that a runner will not be able to finish the race officially within the 48-hour time limit, that runner may be forced to withdraw from the course and the race prior to the actual conclusion of the 48 hours.

5. Running must always be single file, on the far left side of the road or off the left side of the road, facing traffic (pacers, too).

6. Racers must make their presence known at all Time Stations located along the route. Runner arrival times at Time Station will be recorded.

7. The race ends at the Mt. Whitney Portals. If you choose to hike to the summit, please remove any official race logos and be sure to have the appropriate permits from the Forest Service.

8. Racers, crew, and staff must not litter, mar, or pollute the landscape or environment.

9. All racers, crew and staff must display courtesy, good taste, decorum, and sportsmanship at all times. Nudity is specifically not allowed.

Legal and Bureaucratic Issues

1. All racers must follow and complete the entire application and entry process, filling out all forms and paying all necessary fees.

2. All racers must sign the Entrant Contract.

3. All racers and all crew members must sign the Accident Waiver and Release of Liability / Release of Name and Likeness. Each entrant must also bring the properly completed Check-In Form and Medical History Form to Runner Check-In.

4. All race vehicles must meet the minimum requirements of property damage and personal injury liability automobile insurance for the state of California. All vehicle drivers must be fully licensed.

5. All racers and the designated crew chief for each entrant must attend Racer Check-In and all

racers and exactly three crew members must attend their assigned Pre-Race Meeting (Meeting 1, 2, or 3, based upon assigned Starting Wave). Those racers who do not complete the scheduled check-in and attend their assigned meeting will not be allowed to participate. No exceptions.

6. All racers must be willing to submit to a drug urine test before, during, or after the race. If any USOC banned substances are detected, the racer will be disqualified from competition and listed as **DISQUALIFIED FOR DOPING** in the final standings of the race.

7. All racers and crew must pay the Death Valley National Park Entrance Fee. Proof must be brought to Runner Check-In. Runners will not be allowed to check-in for the race without proof of paying the Park Entrance Fee.

8. All entrants must bring one U.S. dollar (or more) in a sealed envelope to Racer Check-In. Please write the runner number on the envelope. This envelope will not be returned and the money will be donated to charity.

9. During Racer Check-In, all entrants must display a minimum of four satisfactory reflective vests and eight blinking red lights - which will be worn and utilized by the runner and crew during nighttime periods of the race. Runners without satisfactory quality, or quantity, nighttime safety equipment will be required to purchase additional gear at that time, IF any such gear is available.

10. All applicants must be a minimum of 19 years in age when submitting an application to race.

11. No TV, film, or video crew, person, producer, director or other broadcast media representative may accompany or cover any racer or the race itself without the specific written permission of AdventureCORPS, Inc. All film crews must sign a Non-Exclusive Licensing Agreement and, potentially, pay a Rights Fee. Additionally, Death Valley National Park and/or the U.S. Forest Service may also require payment of a filming fee and signature of a filming agreement.

Support Crew and Assistance

1. Each racer must be accompanied by a support crew comprised of at least one four-wheeled motor vehicle and two crew members - both of whom are legally licensed to drive and at least one of whom can speak English - at all times. Each racer must have his or her own personal support crew and vehicle; crew and support vehicles may not be shared, except informally in the spirit of the event, i.e., crews may lend assistance to other racers or crews. Race entrants may have no more than two support vehicles and no more than six crew members in total (including "unofficial" and "family cheering squads") at the race. This includes at the finish line: no more than six crew and two vehicles may be present.

2. Runners must progress under their own power without drafting, helping, pushing, supporting, or any other type of physical assistance. Runners may not use walking sticks, ski poles, or the like. So-called "cooling vests" or other types of artificial / technological cooling systems may not be worn or utilized by race entrants while making forward progress on the race course. Crewmembers may not carry an umbrella or shade cover for a runner.

3. Runners may not be accompanied by more than one pacer at any given time while making forward progress on the race course. Additional crew members that are handing off supplies, or otherwise providing aid, to the runner and/or pacer must be off the roadway at all times (i.e. left of the white line on the shoulder) and may not run along with the runner. To be clear: if a runner is moving forward on the race course, **NO MORE THAN ONE** crew member may also be moving with, or near, the runner at the same time.

4. Runners must not run abreast with other runners or with pacers. All running must be single-file. Pacers may not run in front of race entrants at any time.

5. Crew members may not use illegal drugs, stimulants, or dope, as well as alcohol of any kind, during the race or at any official race events or activities.

6. Runners under the age of 60 may not be accompanied by pacers or moving crew members between Badwater and the Furnace Creek time station.

7. Wheeled conveyances (other than a motorized support vehicle), including in-line skates, strollers, and bicycles, are prohibited on the course at all times. Likewise for hovercrafts and helicopters. Runners accompanied by any such conveyance will be disqualified.

Support Vehicles

1. The California Motor Vehicle Code, and all local, county, and/or National Park Service laws, rules, and regulations, must be respected at all times. In particular, support vehicle drivers and crews are reminded that phones must only be operated by the driver with a hands-free device; seat belts must be worn by all vehicle occupants at all times while moving, and it is illegal to drive on a highway while displaying emergency flashers. For further information, consult the DMV Code.

2. Support vehicles may not be wider than 78" in width, as stated in the manufacturer specifications. Small Cars, Minivans, and SUVs are recommended. Oversize SUVs, vans, and trucks, or other types of oversize vehicles are strongly discouraged, even as a secondary support vehicle. Motorhomes, RVs, "SportsMobiles," Sprinter Vans, and all types of Hummers are specifically not allowed.

3. Race entrants may have no more than two support vehicles and no more than six crew members in total (including "unofficial" and "family cheering squads") at the race. This includes at the finish line: no more than six crew and two vehicles may be present. Secondary support vehicles, if any, may not "caravan" with the primary support vehicle; secondary support vehicles are to be used for running errands, crew shift changes, and such. For safety reasons, and to make the limited shoulder parking available to all support crews, secondary vehicles may not generally be in the vicinity of the runner and primary support vehicle, except when passing off supplies and/or crew members. Specifically, secondary support vehi-

cles must leapfrog a minimum of five miles when on the race course in the vicinity of their athletes.

4. All support vehicles must have their headlights on while driving, 24 hours a day, except as noted in Rule 11 in this section of the rules.

5. All race vehicles must have highly visible signage on the back of the vehicle stating "CAUTION RUNNERS ON ROAD," as provided by the race organizers at Runner Check-In. Magnetic, reflective, professionally made signs for this purpose can be made to order by your local sign shop instead.

6. All support vehicles, including secondary support vehicles, must have their racer's name and race number easily visible on all four sides. This type of sign can be made, for example, using yellow, white, or pink adhesive shelf paper with at least 6 inch letters. This should be done in advance of coming to Death Valley. Magnetic, reflective, professionally made signs for this purpose can be made to order by your local sign shop.

7. Vehicle windows may not be blocked or obstructed with any signage, paint, or the like.

8. Only one support vehicle is allowed for each racer at the Start Line before the race and then between the Start Line and the Furnace Creek time station during the race.

9. Only one support vehicle is allowed to support each runner on the Whitney Portal Road. Any second support vehicle must drive directly from Lone Pine to the finish line, stopping NO MORE THAN ONCE anywhere on the Portal Road, if necessary, to swap crew members or transfer supplies with the active support vehicle.

10. Vehicles must "leapfrog" the runner at all times. Attempt to make each "leapfrog" at least one mile or more in length. Racers may not be "shadowed" (driving a vehicle at the runner's speed) and vehicles must not "caravan" (drive together, like a train, at any speed). Driving may never be at the speed of any racer. Driving must be

done at the speed of traffic, never slowing down to encourage, talk to, or lend assistance to any racer while moving. All assistance must be provided by pedestrian crew members; handing off of supplies from the vehicle is never allowed.

11. Vehicles must be parked completely off the road surface whenever they are stopped (with all four tires right of the white line). Many areas of the route have very little shoulder for parking so care must be taken in choosing stopping places. When stopping/parking, vehicles may not stop on the left side of the road. All stopping/parking must be on the right side of the road, off the roadway. From 700pm to 600am each day (night) of the event, at all times while stopped or parked off the road, support vehicles must have their headlights turned off and emergency flashers turned on.

Safety and Medical Issues

1. Remember, at all times and in all situations, safety is the most important issue. This means safety for racers, crew, staff, and the general public. The roads are not closed for this event and are, in fact, quite busy with tourist and local traffic.

2. I.V.s (intravenous fluids) are not permitted during the race. If a racer receives an I.V. during the race, for any reason, then that racer is disqualified and must withdraw from the race and the race course.

3. From 700pm to 600am each day (night) of the event, while outside on the race course, all racers and all crewmembers/pacers must wear reflective material facing in all four directions, as well as blinking red lights facing front and rear. Racers and crewmembers are encouraged to wear reflective material during the day as well. We highly recommend the products from ZombieRunner.com (click "Nighttime Running" in their store.)

4. Racers are responsible for both their own and their crew's actions; crews are responsible for both their own and their racer's actions.

5. Always look and listen both ways before crossing the highways. Remember that drivers will not

expect to encounter a racer or parked vehicle out on the course. Remember we are on public roads. Racers should not cross over the highway more than necessary; crew should cross the highway carefully to bring assistance to their racer.

6. All entrants and crew must study "Medical Risks in the Badwater Ultramarathon," "Dangers of Running in the Heat," and "The Dangers of Hot Weather Running".

Leaving the Course or Withdrawing

1. Every inch of the course must be traveled by each racer. In the event of a routing error, e.g., wrong turn, the racer may be driven back to the exact original spot where he/she left the course and continue running from that location. There will be no allowance made for lost time or miles run in the wrong direction.

2. If a racer needs to leave the course, his/her crew must note the exact location with a numbered stake in the ground. This numbered stake must be visible from the road in both directions. The racer must then resume the race from the same place that he/she left it. The numbered stakes will be provided to all runners at Runner Check-In. Racers may only leave the course for appropriate reasons such as rest or medical attention. Focus must be kept on the speedy completion of the course.

3. If a racer withdraws, he/she or his/her crew must contact Race Headquarters or a Time Station immediately. Name, reason for withdrawal, time of withdrawal, and miles completed must be stated. All racers and crew who drop are encouraged - and expected - to come to the finish line and both post-race events to greet and celebrate with their fellow racers and crews.

4. All Emergency Evacuation costs for participants or crews will be borne by that person or their heirs. The race organizers are in no way liable or responsible for emergency evacuation.

Awards

1. All racers who begin the event will receive a Badwater Ultramarathon race t-shirt, hat, Race

OFFICIAL RULES

Magazine, and a goodie bag with other one-of-a-kind Badwater items and products from the race sponsors, as well as entry into the post-race pizza party (for the racer and up to six crew members). All racers who officially complete the event within 48 hours will receive a finisher's t-shirt and commemorative Badwater Ultramarathon buckle.

Rule Enforcement and Penalties

1. Race rules are designed to provide a safe and fair experience for everyone involved and to help ensure our ability to produce the race again next year.

2. Major rule infractions by racers or their crew, especially those regarding "cheating," will result in immediate disqualification of the racer.

3. Other, lesser offenses will result in the following cumulative time penalties:

- First Penalty: One Hour
- Second Penalty: Disqualification

4. Time penalties are imposed by stopping at the final Time Station in Lone Pine to serve his/her time. The race and clock will continue

while the penalized racer waits out his/her penalty time. A Race Official will be present to oversee this process.

5. The Race Director has the authority, at any time, to overrule any rule or invent a new rule based on extenuating, unforeseen, and/or unusual circumstances and/or to maintain the integrity and fair play necessary for the successful completion, and continuation, of the race. The Race Director has ultimate authority in regards to all rules, their interpretation, and their enforcement. There is no "appeals committee" nor an "appeals process." All entrants in the race, and their support crews, willingly acknowledge this fact, as well as all other race rules, by attending the race in any capacity.

6. In all cases and circumstances, it is the intent, and spirit, of the rules which will govern their implementation and enforcement.

Finally

1. Have fun and keep smiling!



Reflective moments for the 10am Wave during the National Anthem.

2011 OFFICIAL RACE ROSTER

6:00 AM START

#	R/V	M/F	Age	Name	City	State	Country	Nationality
19	Veteran	F	52	Alexander, Lorie	Vernon	BC	Canada	Canada
52	Rookie	F	52	Betts, Mary	Surrey	BC	Canada	Canada
73	Rookie	M	58	Bucci, Paolo	San Polo di Torrile	Parma	Italy	Italy
51	Rookie	F	51	Budzik, Kimberlie	Friendswood	TX	USA	USA
75	Rookie	M	46	Butcher, Bill	Fairview	NC	USA	USA
78	Rookie	M	20	Clark, Benjamin	Fargo	ND	USA	USA
80	Rookie	M	58	Ehasz, James	Parker	AZ	USA	USA
16	Rookie	M	48	Ettinghausen, Ed	Murrieta	CA	USA	USA
15	Veteran	F	50	Farar-Griefer, Shannon	Hidden Hills	CA	USA	USA
66	Veteran	M	61	Frixe, Eberhard	Meine	Lower Saxony	Germany	Germany
58	Veteran	M	61	Jensen, Daniel	Sioux Falls	SD	USA	USA
59	Rookie	M	59	Kelly, Edward	Palatine	IL	USA	USA
39	Veteran	M	39	Kelly, Joey	Meine	Lower Saxony	Germany	Ireland
29	Rookie	F	26	Klimowicz, Brittany	Astoria	NY	USA	USA
74	Veteran	M	51	Marrnsik, Dan	San Jose	CA	USA	USA
69	Rookie	M	69	Mauro, Anthony	Wexford	PA	USA	USA
48	Veteran	M	48	McKinney, Frank	Delray Beach	FL	USA	USA
65	Rookie	F	32	Murphy, Meredith	Chester Springs	PA	USA	USA
53	Rookie	F	53	Owen, Barbara	Maple Ridge	BC	Canada	Canada
88	Veteran	M	60	Parker, Ian	Irvine	CA	USA	UK
82	Rookie	F	44	Pfeil, Terri	Boulder	CO	USA	USA
89	Veteran	M	40	Portera, Anthony	White Plains	NY	USA	USA
77	Veteran	M	57	Radich, John	Monrovia	CA	USA	USA
64	Rookie	F	42	Sieminowski, Tammy	Toronto	ON	Canada	Canada
17	Veteran	F	50	Smith-Batchen, Lisa	Driggs	ID	USA	USA
49	Rookie	M	49	Thomas, Michael	Fort Collins	CO	USA	USA
23	Veteran	M	60	Ulrich, Marshall	Idaho Springs	CO	USA	USA
92	Rookie	M	44	Vieler, Jens	Hagen	NRW	Germany	USA
46	Veteran	M	47	Walker, David	Auckland	Auckland	New Zealand	Germany
93	Rookie	F	40	Walther, Tammy	Little Rock	AR	USA	New Zealand
13	Veteran	M	69	Webb, Arthur	Santa Rosa	CA	USA	USA
50	Veteran	F	53	Zwarkowski, Cheryl	Spring Valley Lake	CA	USA	USA

8:00 AM START

#	M/F	Age	Name	Rookie/Veteran	City	State	Country	Nationality
14	Veteran	F	49	Anderson, Mimi	Ashford	Kent	UK	UK
9	Rookie	M	34	Bhatt, Divesh	Pittsburgh	PA	USA	India
27	Rookie	M	27	Blessing, Ben	Nampa	ID	USA	USA
45	Veteran	F	53	Busch, Bonnie	Bettendorf	IA	USA	USA
18	Veteran	F	52	Cooper Imhof, Iris	Toronto	ON	Canada	Switzerland
28	Veteran	M	53	Cuff, Kermit	Mountain View	CA	USA	USA
34	Veteran	F	35	Dockendorf, Connie	North Las Vegas	NV	USA	USA
62	Veteran	M	55	Finnell, Scott	Allison Park	PA	USA	USA
40	Rookie	F	40	Frazier, Rochelle	Coppel	TX	USA	USA
55	Veteran	M	60	Frost, Chris	Malibu	CA	USA	USA
20	Veteran	F	47	Lemus, Maria	Los Angeles	CA	USA	El Salvador
54	Rookie	M	48	Lockwood, Glenn	Little Bay	NSW	Australia	Australia
57	Rookie	M	41	Meech, Eric	La Jolla	CA	USA	USA
21	Veteran	M	42	Molteni, Stefano	Albese con Cassano	Como	Italy	Italy
67	Rookie	F	51	Muston, Pam	Wamboin	NSW	Australia	Australia
98	Veteran	M	46	Ng, Hung-Kwong	Orlando	FL	USA	USA
72	Veteran	F	47	Nitzky, Alene	Fort Collins	CO	USA	USA
68	Rookie	M	45	Nucifora, Carmelo	Mestre	Venice	Italy	Italy
63	Veteran	M	64	Olson, Mark K.	Covina	CA	USA	USA
81	Rookie	M	51	Päivinen, Ari Pekka	Karjalohja	Uusimaa	Finland	Finland
70	Veteran	M	35	Recore, Brian	Valley Center	CA	USA	USA
83	Rookie	M	42	Sanchez, Juan	Saint Helena	CA	USA	Mexico
41	Veteran	M	44	Sanchez, Ray	Sacramento	CA	USA	USA
47	Rookie	M	47	Steiner, Manfred	Buchkirchen	Upper Austria	Austria	Austria
60	Veteran	M	56	Straw, Keith	Malvern	PA	USA	UK
90	Rookie	M	47	Teeples, John	Fortson	GA	USA	USA
91	Rookie	M	27	Veics, Arthurs	Riga	Riga	Latvia	Latvia
30	Rookie	F	30	Vogel, Jennifer	Duluth	GA	USA	USA
84	Veteran	M	52	Westergaard, Danny	Rolling Hills	CA	USA	USA

10:00 AM START						
#	M/F	Age	Name	Rookie/Veteran	City	State
8	Rookie	M	42	Bhardwaj, Arun	New Delhi	India
71	Rookie	M	45	Blake, Jonathan	Illawong	NSW
43	Rookie	M	43	Bomhoff, Greg	Granite Bay	CA
76	Rookie	F	34	Carawan, Brenda	Virginia Beach	VA
33	Rookie	M	33	Clark, Tony	Wichita	KS
79	Rookie	M	42	Corbarieu, Thierry	Lagrace Dieu	France
7	Veteran	M	37	Deshais, Eric	Gatineau	Quebec
5	Veteran	M	48	Escobar, Luis	Santa Maria	CA
4	Veteran	M	43	Farinazzo, Marco	Barcelos	AM
42	Veteran	M	43	Fortney, Darren	Middleton	WI
25	Rookie	F	46	Gay, Florence	Lescar	France
36	Rookie	F	36	Gelder, Emily	London	UK
1	Veteran	M	31	Gingerich, Zach	Aurora	IL
11	Rookie	F	45	Inagaki, Sumie	Kasugai	Aichi
44	Veteran	M	45	Iwamoto, Nobumi	Chiyoda	Tokyo
12	Rookie	M	45	Kamei, Tomotaka	Nagoya	Aichi
32	Rookie	M	32	Koop, Jason	Colorado Springs	CO
35	Rookie	M	35	Lewis III, Harvey Sweetland	Cincinnati	OH
31	Rookie	M	51	Lindermueller, Kurt	San Rafael	USA
2	Veteran	M	39	Lopez, Oswaldo	Madera	Costa Rica
37	Veteran	M	41	Lusskandl, Gerhard	Obert-Grafendorf	CA
56	Rookie	M	46	Matyazic, Mark	Irvine	Lower Austria
61	Rookie	F	36	Mullen, Jess	Seattle	CA
85	Veteran	M	49	Neckar, Tim	Houston	WA
38	Veteran	F	38	Palmero-Winters, Amy	Hicksville	TX
24	Veteran	M	29	Ploskonka, David	Baltimore	NY
99	Veteran	M	43	Pressler, Greg	Portland	MD
6	Veteran	F	50	Reed, Pam	Jackson	OR
22	Rookie	M	41	Roman, Chris	Jacksonville	WY
86	Rookie	M	44	Sekiya, Ryoichi	Sagamihara	FL
87	Rookie	M	47	Sentinella, Terry	Anacortes	WA
100	Rookie	M	37	Wardian, Michael	Arlington	VA
94	Rookie	M	32	Wog, John	Santa Monica	CA
95	Rookie	M	37	Youngren, Robert	Huntsville	AL



4.



5.



6.



7.





**PHOTOS FROM BADWATER
ULTRAMARATHON 2010**

- 1 Kari, Phil, and John working hard at Stovepipe Wells
- 2 Casey Dakus and Gumby salute after the National Anthem
- 3 Marcio Villar do Amaral and crew from Brazil
- 4 Connie Gardner
- 5 Pam Reed
- 6 Medical Team
- 7 Iris Cooper-Imhof and crew
- 8 Motivation and inspiration
- 9 Stewards of our home away from home
- 10 Jorge Pacheco, Oswaldo Lopez and crew
- 11 Nobumi Iwamoto and crew from Japan



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Arthur Webb ran his 12th Badwater Ultramarathon in 2010 (pictured above). This year he will go for number 13! Good luck, Arthur! Photo : Luis Escobar



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