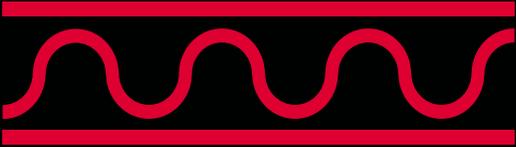


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**WORLD'S  
TOUGHEST**

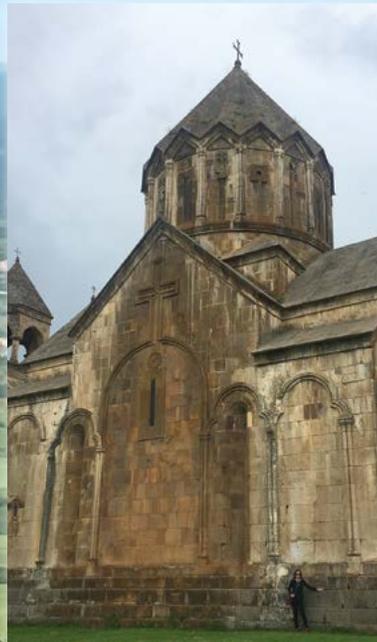
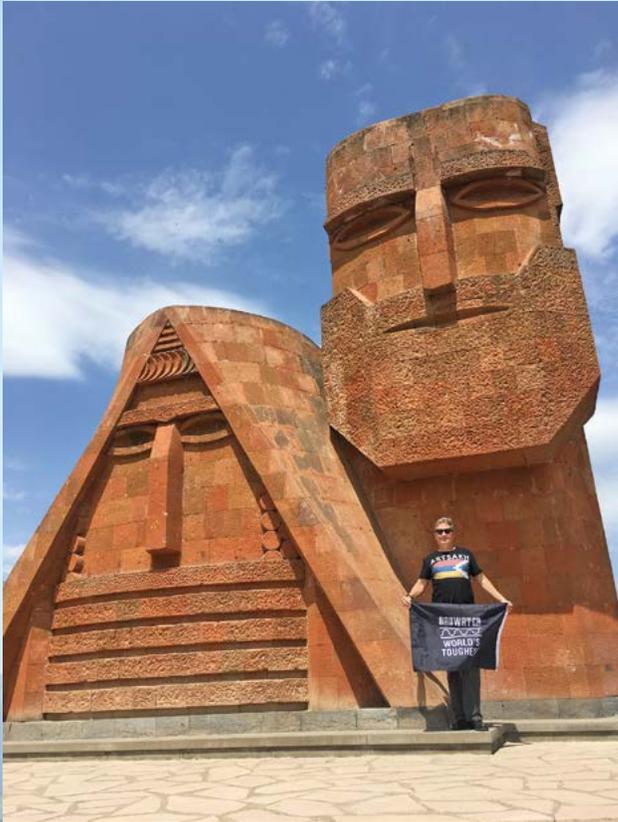
**July 2019**

*Celebrating 20 Years of Badwater 135*

**adventureCORPS®**  
"Out There Since 1984"

# Explore Artsakh!

*The Mountainous Republic of Artsakh is a democratic Christian Armenian nation located just east of Armenia itself. It's a gorgeous place with trails and pathways dating back literally thousands of years traversing pristine lands and passing through towns and villages, ancient sites, natural wonders, Christian churches dating as far back as the 4th Century AD, the historic city of Shushi, the gorgeous capital city of Stepanakert, and so much more. Artsakh is just a short flight from Europe and well worth the trip from all the corners of the globe!*



For more info, visit [www.artsakh.travel](http://www.artsakh.travel)  
And [www.Badwater.AM](http://www.Badwater.AM)



L-R: The Kostman Family: Chris, Shelby, Keith, and Wayne. Keith heads up the Badwater 135 webcast each year and has supported Chris' events since 1985. Wayne and Shelby volunteered at many dozens of events that Chris produced from 1984 all the way to 2014, when they supported the Badwater 135 that year. It was from these amazing parents - who took Keith and Chris on not one, but two, one-year-long travels through Europe and North Africa during their childhood in Volvo station wagons - that the Kostman brothers learned their appreciation for travel, adventure, "foreign" cultures, languages, history, and so much more.

Welcome to the July 2019 edition of BADWATER® Magazine! We are AdventureCORPS®, an athlete-run firm producing and promoting ultra-endurance sports events and the BADWATER® brand. Adventure is our way of life, so we are pleased to host the 42nd anniversary Badwater® 135 Ultramarathon, known globally as "the world's toughest foot race," on July 15-17, 2019. This magazine celebrates that race and its setting, as well as the entire Badwater® Ultra Cup series of races, and what we like to call the Badwater Family and the Badwater Way of Life.

This year's race celebrates the 42nd anniversary of Al Arnold's original trek from Badwater Basin to Mt. Whitney in 1977. Arnold, an ultrarunning pioneer, human potential guru, and health club manager, competed in a solo effort: it was just Arnold and his support crew against the elements and the clock. It took him three efforts before he was successful, having first attempted the route in 1974 and then 1975. It took four more years until Jay Birmingham also completed the course, in 1981.

The official head-to-head race began ten years after Arnold's pioneer trek, in 1987, and has been held annually since then without serious incident, fatality, or any citations issued by any branch of law enforcement. We are extremely proud of our safety record and the high esteem in which this race is held. We are equally - if not more - proud that this event has become the de facto "Olympics

of Ultra Running" with its incredible international appeal and participation. This year we will have 21 nations represented, along 30 different American States! We welcome everyone to what we like to call "Mother Nature's Greatest Sports Arena" for this "Challenge of the Champions."

This year we also celebrate 20 years of AdventureCORPS producing this historic and legendary race. Yours truly took the event over after the 1999 edition. (I had been invited to compete in 1991 - when I was 24 years old - but I ended up accepting a race directing job in Canada that summer instead. I have been organizing ultra endurance events for as long as I have been competing in them - since 1984.)

It's been a privilege and an honor - and an epic challenge far surpassing anything I could have ever imagined - to organize and direct this race for 20 years. I humbly thank everyone - especially the incredible race staff - for their important roles in hosting this race and helping to ensure that it runs smoothly, safely, and fairly. Long live Badwater!

Yours in sport,

*Chris Kostman*

Race Director and Chief Adventure Officer



## Badwater 135: How It All Began

By Roy M. Wallack

Consider Al Arnold, the man who started it all.

"I've always been the type who thought, 'If the world's going one way, then I'm going the other,'" said Arnold, when 75 and living in Walnut Creek, CA.

Arnold was always trying something just to prove it could be done. At age 21, he was a muscle-bound 6-foot-5 brute who, just for fun, would lift up the rear ends of small cars. He tried out for the 1948 U.S. Olympic boxing team as a light-heavyweight. During a U.C. Berkeley science project, he and a friend rode a teeter-totter for 72 hours straight, setting a world record of 45,159 up-and-downs. After taking 12 years to graduate with a business degree, he worked as a technician building ocean wave force-measuring devices, married twice, enjoyed the good life, and morphed "from jock to fat slob" (his words) as he ballooned to 275 lbs.

Then, at age 39, Arnold got some life-changing news: He had glaucoma.

He could no longer see well enough to hit a tennis ball. He was told by a doctor that "I'd soon have a tag on my toe." But he didn't really get motivated to change his life until he got word of the upcoming 1968 US-World Masters Invitational Track & Field Championship. Soon, just to prove it could be done, Arnold was running stadium steps with 100 lbs. of weights strapped to his body. In 18 months, he'd dropped to a solid 225 lbs. At the masters championships, he won the half-mile, and ran the quarter mile in 69 seconds. Before long, Arnold was working as an athletic director at a health club. Before most people had heard of the term, he was an ultrarunner.

In 1973, Arnold heard about Paxton Beale and Ken Crutchlow, who did a 150-mile relay run from Badwater, the lowest point in the Western Hemisphere at 280 feet below sea level, all the way to the top of 14,496-ft. Mt. Whitney, the highest point in the contiguous United States. Crutchlow, an Englishman from Santa Rosa, CA who imported London cabs for a living, did a lot of crazy stuff in his time - including riding a bike from San Francisco to Alaska on a bet. Scanning a map of California, he'd noticed how close the "lowest" and "highest" points were. According to one report, he considered it "outrageous" to think that any man could complete that trek alone.

Arnold was electrified when he heard about the tag-team's achievement. Death Valley fascinated him. Growing up in the 1940s, his favorite radio show was "Death Valley Days." He'd imagined old prospectors, battles with Indians, noble pioneers struggling for existence.

"Immediately, I knew that I had to do that run, too," says Arnold. "But I wasn't about to leap-frog." He did plan to run with a partner - his dentist David Gabor, a former Hungarian freedom fighter- but both would complete the entire route.

In 1974, the pair pushed off at Badwater. Several hours later, the mercury topped out at over 130 degrees.

They lasted 18 miles - until Gabor went into shock. "My buddy almost died," said Arnold. "His whole body shut down. Blood flow to the arms and legs stopped. We had put him into an ice-filled bathtub at the Furnace Creek Ranch. Took him months to recover."

From that point on, Arnold knew he had to go it alone. "When you do something like this, as far-out as Badwater, your mind has to be focused. You can't feel responsible for someone."

So, a year later, the 47-year-old Arnold was back. Unfortunately, his knee was not cooperative. Its grotesque swelling stopped his second attempt at mile 36, just before beginning the ascent of 4956-ft.-high Townes Pass.

But 1977 would be different. For two years, Arnold trained like a man possessed. He pedaled a bike in a 200-degree sauna for two hours a day. Carrying no water and living off the land, he ran 200 to 250 miles a week up and down 4,000-ft. Mt. Diablo, a Bay Area landmark near his home. He once jogged 36 hours straight. "I became so much a part of the land that I could walk through a pack of deer without them moving," he says. "Once, I shared a water hole and its surrounding shade with the 'Resident Mountain Lion.' I never saw it again. It was one of those moments that you never forget."

On August 3, 1977, Death Valley recorded its highest known temperature that year: 124 degrees. While the nearly 50-year-old Al Arnold jogged and power-walked, the super-heated road surface radiated nearly 200 degrees. He left Badwater Basin before dawn, along with a two-man support crew, photographer Erik Rakonen and friend Glenn Phillips, and 30 gallons of a self-concocted electrolyte solution of fructose and water. He drank it all.

Arnold covered the first 40 miles in 10 hours, developed knee trouble on the 17-mile climb over Towne Pass, stopped to stretch for a couple hours, then kept going, very slowly. "At least I'd learned one thing over the years: Go fast and you die," he says. Amazingly, Arnold ran an extra 46 miles over the second half of the route. First, the paved ascent to Father Crowley from Panamint Springs was closed due to major road work. Arnold grabbed two gallons of water and ran north and then west on the rocky desert terrain. He climbed up the nearly vertical cliff face to Father Crowley point and rejoined the highway beyond the road construction.

Later, concerned over the disappearance of his support vehicle, he actually ran back 22 miles to find Rakonen, now crewing alone, asleep and "dead to the world" in the car. A purist, he refused a ride 22 miles back up the course and instead just resumed running towards Whitney.

Searing winds blasted Arnold with sand and silt on the climb over the Inyo Mountains, but it didn't matter. In his mind he had become Olympic decathlon champion Bruce Jenner, immortalized on a box

of Wheaties. As he descended into the Owens Valley, he gazed at Mt. Whitney for the first time. The sight so moved him that he stopped and spoke directly to the mountain.

"You probably thought you'd never see me, but soon I'm going to be on top of you," Arnold warned the peak, according to a profile in the 1978 issue of *Marathoner* magazine. "She's a very powerful lady," he explained, "and I didn't want to conquer her - just be part of a relationship."

Approaching the little town of Lone Pine, the last stop before the final climb, people started coming out onto Highway 136 to take pictures of the "crazy man who had just run from Death Valley." A Highway Patrolman handed him a hamburger and chips. He ate only the bun and headed uphill into the Sierra Foothills, dodging two wild donkeys on the way to the Mt. Whitney Portal at 8400 ft.

The pavement ended and the 11-mile climb up the Mt. Whitney trail began. "As I got closer and closer to the top, the hikers, forewarned of my arrival, all cheered for me," says Arnold. "It was like a ticker-tape parade."

About 192 miles after he'd begun his quest, Arnold reached 14,496 feet -- the Mt. Whitney summit. He burst into tears and couldn't stop. He'd lost 17 lbs. -- 8 % of his body weight. He'd been on the road for 84 hours.

Yet there was no time to spare. As dusk fell, Arnold staggered down to the Trail Camp campsite at 12,000 ft. A tent, sleeping bag and warm clothing were to have been stored for him there. Instead, there was nothing left but a plastic tarp. Everything else had been stolen.

After roasting alive in 120- to 130-degree temperatures for over three days, Arnold spent the fourth night in his running shorts, rolled up in plastic, shivering in 20-degree temperatures.

A couple of days later, Arnold's wife suggested a way to warm her man up: A trip to Maui. It would lead to a test more challenging than his amazing run.

On his tenth day of bodysurfing, a 25-ft. wave torpedoed Arnold into the sand, dislocating the cervical area of his neck, separating both shoulders and leaving a severe contusion on his spinal cord. Paralyzed below the neck, gulping for air, Arnold went under seven times before washing up on the shore.

Doctors told him he'd never be able to walk again without a walker, but Arnold left it on the sidewalk when the cab drove him to the airport for the flight home. A mere four months later he ran the five-loop Paul Masson Winery Marathon, stopping every five miles to run into the fire station to clean his running shorts. The accident had left him without bladder or bowel control, a condition that wouldn't clear up for nearly 15 years. Nonetheless, he finished in 4:59:59, much to the amusement of those who trailed him.

"I'll never live it down,' my friend Stan Pletz told me," said Arnold, "I was beaten by a paralyzed man."

A year later, he ran 99 miles around Lake Tahoe in 19 hours.

Despite his continued running, Arnold never fully recovered from his paralysis. "My body feels like my foot's been asleep for 25 years," he said in 2002.

As for Badwater, Arnold's never considered trying it again. "I did it to prove it could be done -- like Roger Bannister breaking the four-minute mile," he said. "Now, I just sit back amazed at the world-class names who do it now. I'm not in their league."

True. Al Arnold is in a league all his own.

## **THE RACE IS ON**

In 1980, 34-year-old Jay Birmingham, a running-store owner from Jacksonville, FL, ran from Los Angeles to New York wearing a small backpack in 71 days, 22 hours, and 59 minutes, the fastest non-supported transcontinental crossing in history. That run, mainly along old U.S. 60, taught him a lot, but especially one thing: "I was a good hot-weather runner," he said. He'd easily cruised through a heat wave that stretched from Texas to Indiana.

Birmingham had read the article in *Marathoner* magazine about Al Arnold and felt 84 hours would be an easy record to break. He'd also gotten advice from Badwater wannabe Gary Morris, who only got as far as Townes Pass in 1980. So, in August of 1981, Birmingham embarked on a family road trip through North Carolina, Colorado, Las Vegas, and other places, getting in his training miles along the way. They eventually arrived in Death Valley and he started running from Badwater at 600 AM on August 15.

He summited Mt. Whitney 75 hours and 34 minutes later.

Other than "terrible pain in my heel" from Towne Pass to Lone Pine due to a heat-bloated lump in his shoe, the run went smoothly. Birmingham never ran past 1000 PM, slept at least six hours a night, and climbed Whitney with his entire family without any altitude problems. He found the dry heat of Death Valley to be much easier than the draining humidity of his Florida training ground; a week spent in the Rockies just before the run acclimatized him to high elevations.

Birmingham's feat didn't gain him national fame, but he did become the first person to publish a book about Badwater in the form of "The Longest Hill," released in 1983. He also put his name in the Guinness Book and set off a slow-building land rush which saw 30 people complete the lowest-to-highest course in the next decade. In 1982, Max Telford of New Zealand blitzed the blistering course in just 56:33. American Gill Cornell, starting at night, ran a 45:15 in 1987. The very next day, Badwater godfather Ken Crutchlow returned with two Americans and a fellow Brit to stage the first actual head-to-head race on the course, U.S. versus U.K. All four finished. That inaugural 1987 race was the first of the annual races held since then, and organized by AdventureCORPS and Chris Kostman since 2000.

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**adventureCORPS®**  
"Out There Since 1984"  
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after working with us!



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## Schedule of Events

### SUNDAY, JULY 14

**100-400pm: Runner Check-In and Registration / Retail of BADWATER Gear:** Held in the Date Grove Diner at The Oasis at Furnace Creek (next to golf course.) Please do not all show up at 100pm! It takes quite a while to go through the Check-In process! We suggest that 1st wave runners arrive at 100pm, 2nd wave runners arrive at 200pm, and 3rd wave runners arrive at 300pm. (Each Racer and their designated Crew Chief must attend; all crew are welcome and encouraged to attend). NOTE: All retail is first come, first served. If there is something you NEED or MUST BUY, be there at 100pm to purchase.

**500-630pm: Pre-Race Meeting for ALL Racers + ALL Crew Chiefs.** ALL racers and ALL crew chiefs must attend the Pre-Race Meeting (but no other crew members). Held in the Auditorium at the National Park Service Visitors Center in Furnace Creek.

**630pm(app.): Group Photo of All Racers at the Thermometer in front of the Visitors Center.**

### MONDAY, JULY 15

**1230-130pm: Optional Races Rules Review / Questions & Answers / Discussion of Best Crewing Practices / Retail of Badwater Gear:** Since only racers + crew chiefs may attend the Pre-Race Meeting on Monday, we also host a follow-up meeting to review race rules and best crewing practices, as well as a Q&A session, along with retail of Badwater gear. Anyone may attend. If you want or need to know more this race, how to crew, or anything else, please attend! Held in the Date Grove Diner at The Oasis at Furnace Creek (next to golf course.)

**130-200pm: Media Check-In and Briefing:** All journalists / media / photographers must attend. Held in the Date Grove Diner at The Oasis at Furnace Creek (next to golf course.)

**200-300pm: Private Staff Meeting:** Held in the Date Grove Diner at The Oasis at Furnace Creek (next to golf course.)

**800pm: 1st Wave Starts at Badwater Basin:** ALL Wave 1 runners must check in and weigh in no later than 730pm.

**930pm: 2nd Wave Starts at Badwater Basin:** ALL Wave 2 runners must check in and weigh in no later than 900pm.

**1100pm: 3rd Wave Starts at Badwater Basin:** ALL Wave 3 runners must check in and weigh in no later than 1030pm.

### TUESDAY, JULY 16

**300am: Furnace Creek General Store Closes.** By special arrangement, the General Store at Furnace Creek will remain open on the first night of the race until 300am. Stop there to buy food, snacks, drinks, and plenty of ice.

**400am: Stovepipe Wells General Store and Gas Station Opens.** By

special arrangement, the General Store and Gas Station in Stovepipe Wells will open at 400am during the first night of the race. They have food, snacks, drinks, ice, and much more. Please support them, and stock up heavily!

**1000am: First Time Cut-Off.** Deadline for ALL RUNNERS, regardless of starting wave, to pass Mile 50.5 (2000' Elevation Sign, located 8.6 miles beyond Stovepipe Wells.)

**800pm: Second Time Cut-Off.** Deadline for ALL RUNNERS, regardless of starting wave, to pass Mile 72 (Panamint Springs Resort.)

### WEDNESDAY, JULY 17

**500am: Third Time Cut-Off.** Deadline for ALL RUNNERS, regardless of starting wave, to pass Mile 90 (Darwin Time Station.)

**600pm:** ALL runners are encouraged to complete the race by 600pm on Wednesday in order to attend the post-race get-together in Lone Pine. That "soft" deadline equals a 46-hour completion for the 800pm wave runners, 44.5 hours for 930pm wave starters, and a 43-hour completion for 1000pm wave starters.

**700-900pm: Post-Race Get-together:** Lo-Inyo Elementary School at, 223 East Locust Street (1.5 blocks east of Hwy 395 in the north-east end of town). Pizza and drinks will be served. No charge (up to four crew per runner may attend.)

**800pm: Course Closes for 1st Wave Runners** (48-hour time limit, based on start; all runners recommended to finish by 600pm.)

**930pm: Course Closes for 2nd Wave Runners** (48-hour time limit based on start; all runners recommended to finish by 600pm.)

**1100pm: Course Closes for 3rd Wave Runners** (48-hour time limit based on start; all runners recommended to finish by 600pm.)

\* \* \*

**SUNRISE / SUNSET** (July 15, using Ridgecrest for reference):  
Civil Twilight (AM): 5:17am | Sunrise: 5:46am | Moonrise: 7:27pm  
| Sunset: 8:06pm | Civil Twilight (PM): 8:36pm | Moonset: 4:38am.  
Note: July 16 is the full moon.

**PERMITS:** This event is held under special use permits from the California Department of Transportation, Inyo National Forest, Death Valley National Park, and Inyo County, and is additionally overseen by the California Highway Patrol. (If one of these agencies won't issue us a permit, this race could be cancelled. Please keep that in mind!)

#### DRIVING DISTANCES:

Las Vegas Airport to Furnace Creek: 120 miles  
Los Angeles Airport to Furnace Creek: 270 miles  
Lone Pine to Las Vegas Airport: 225 miles  
Lone Pine to Los Angeles Airport: 220 miles

The sixth annual Badwater® Cape Fear 50km / 51mi ultramarathon took place March 16, 2019, on Bald Head Island, North Carolina. A field of 159 runners from eleven countries and twenty-three American states competed, with 58 of 60 runners completing the 50km race and 99 runners completing the 51-mile race.

With 50km and 51-mile race options, Badwater® Cape Fear features a twelve-mile warm-up on the car-free, one-lane-wide roads (and trails) of Bald Head Island, followed by either 19 or 39 miles of running on the wild and secluded sandy beach between Cape Fear and Fort Fisher. The race is held along the Atlantic Seaboard with spectacular views of the Frying Pan Shoals to the east and wild and undeveloped Cape Fear River marshlands to the west. Running this remote coast is a dramatic, invigorating, and inspiring manner in which to experience the Cape Fear region in all its grandeur!

Our only (B)east Coast race, this exquisite natural setting is the perfect antidote to the "real world" and a wonderful counterpart to the desert sands and mountains of Death Valley and Anza-Borrego Desert featured in the two West Coast BADWATER® races.

Registration is already open for the March 21, 2020 edition, and there is a 200-runner limit which will sell out. Whether you are a grizzled Badwater veteran, or looking to take on your first Badwater race, we hope you will join us!

Visit [www.badwater.com](http://www.badwater.com) for all the information and the registration link.





**BADWATER CAPE FEAR**  
Bald Head Island  
50-km · 50-mi Run



**BADWATER CAPE FEAR**  
Bald Head Island  
50-km · 50-mi Run



**BADWATER CAPE FEAR**  
Bald Head Island  
50-km · 50-mi Run





# About Cape Fear

Cape Fear is a prominent headland jutting into the Atlantic Ocean from Bald Head Island on the coast of North Carolina in the southeastern United States. It is largely formed of barrier beaches and the silty outwash of the Cape Fear River as it drains the southeast coast of North Carolina through an estuary south of Wilmington.

Cape Fear is formed by the intersection of two sweeping arcs of shifting, low-lying beach, the result of longshore currents which also form the treacherous, shifting Frying Pan Shoals, part of the Graveyard of the Atlantic.

Dunes dominated by sea oats occur from the upper beach driftline back to the stable secondary dunes, where they mix with other grasses such as Saltmeadow Cordgrass and panic grass, as well as seaside goldenrod, spurge and other herbs to form a stable salt-tolerant grassland.

The Cape Fear estuary drains the largest watershed in North Carolina, containing 27% of the state's population.

Giovanni da Verrazzano, the Italian explorer sailing for France, made landfall after crossing the Atlantic at or near Cape Fear on March 1, 1524.

The name comes from the 1585 expedition of Sir Richard Grenville. Sailing to Roanoke Island, his ship became embayed behind the cape. Some of the crew were afraid they would wreck, giving rise to the name Cape Fear. It is the fifth-oldest surviving English place name in the U.S.

Cape Fear was the landing place of General Sir Henry Clinton during the American Revolutionary War on May 3, 1775. The 1962 movie *Cape Fear* and its 1991 remake were set at Cape Fear.

The legend of Cape Fear lives on with BADWATER® CAPE FEAR!

*Source: Wikipedia*

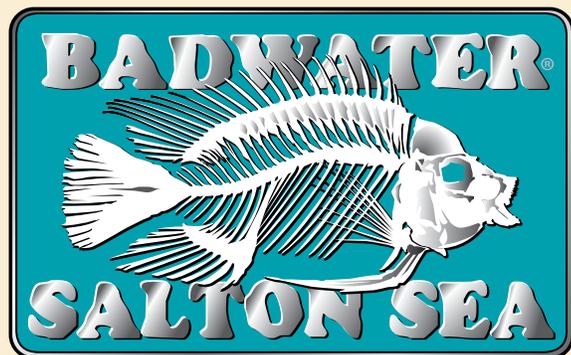
The seventh annual Badwater Salton Sea 81-mile ultramarathon took place April 28-29, 2019. This remarkable event challenges teams of two or three ultrarunners – running together as duos or trios for the duration, NOT in a relay – to tackle an unimaginable traverse of Southern California deserts and mountains. This year, one hundred and ten runners, comprising 43 two- or three-person teams (running together, NOT as a relay), competed, representing twenty-five US states and fifteen nationalities: Armenia, Australia, Canada, Cayman Islands, Czech Republic, Germany, India, Japan, Mexico, Netherlands, Philippines, Poland, Sweden, Switzerland, and USA. Special guests this year included race director Chris Kostman's mother Shelby Kostman and his cousin, Dale Kostman. They came to support the race and to help Chris celebrate 20 years of hosting BADWATER races.

Of the 43 teams entered, just 29 completed the race intact, with just 72 of 110 runners finishing officially. Teams that do not finish as a complete unit are unranked, though all finishers receive the coveted Badwater Salton Sea buckle featuring the fish skeleton motif reminiscent of the start line.

The route covers 81 miles (130km) from Salton City (elevation 234 feet / 71m below sea level) to Palomar Mountain, the almost tallest mountain in San Diego County (elevation 5500 feet / 1676m.) Eight of the 81 race miles pass through Anza-Borrego State Park on a single track trail from Borrego Springs to near Ranchita, creating a race route which is a mix of road and trail. There is a total elevation gain of over 9000 feet (2740m).

We anticipate opening registration for the April 26-27, 2020 edition on October 1, 2019.

**Visit [www.badwater.com](http://www.badwater.com) for all the information and the registration link.**









# THE MEANING

*Badwater means community. It's a family of like-minded adventurers who gather to test themselves in one of nature's most formidable playgrounds. It's a feeling of excitement, and the little voice in the back of your head that reminds you there is no other place you'd rather be in mid-July.*

—**Jean Aponte (Louisiana)**

*Badwater is an epitome of a goal to achieve. I believe, 'Goals make us better'. Badwater is also synonymous to an organization that puts on events of the highest quality. Everyone I have talked to, can't stop saying enough good things about Badwater.*

—**Siva Balu (India)**

*For me Badwater means the most important challenge, it's like running in hell and reaching paradise, I want that buckle!!!*

—**Hector Bengolea (Argentina)**

*Being scared, but still doing it. Life is short.*

—**Ben Blessing (Idaho)**

*Badwater is a journey that mimics life. Badwater is a test I want to take and pass. Badwater may feel like a solo trip but it's really shared with "family." Badwater is damn tough but a celebration of living life to the fullest. I've experienced hardship, but these races still teach me freedom, clarity and strength.*

—**Brenda Blinn (California)**

*Badwater represents the toughest and the grittiest of athletes with a unique story of hope and inspiration to share. Badwater helps us to dig deeper than we've ever known possible and to use that grit to deal with the toughest of situations that life throws at us.*

*Life is challenging, but Badwater helps prepare us by living in the moment and enjoying the gift of life.*

—**Kimberlie Budzik (Texas)**

*Badwater is a hidden world that briefly brings people together to accomplish one thing, to get down the road safely from the start to the finish. At its very best, it depicts a mythical existence where we help each other and accomplish more than what we thought was possible. We travel through a landscape that we enjoy but leave untouched. We each leave enriched and rewarded by the experience.*

—**Bonnie Busch (Iowa)**

*If you want to be happy for a year, win the lottery. If you want to be happy for a lifetime, join the BADWATER FAMILY.*

—**Chris Calimano (New York)**

*BADWATER is the top of the ziggurat. It denotes the top of the field, people at the edge of the envelope. When I meet people, and it comes out that they have done BADWATER, it confers an automatic personal legitimacy and respect—and they rarely disappoint on that perception.*

—**Matthew Collins (Pennsylvania)**

*Badwater to me is a lifestyle. It's living as if you are "UNSTOPPABLE." It's about seeking more out of yourself and living life adventurously. It is a family of unique and different people from all over the world who are seeking something extraordinary. These same people are the type who take "the road less traveled." It's more than a series of races, a brand, or a name; it is a community that changes people's lives. I'm honored to call myself a part of this community and I proudly live the Badwater lifestyle on a daily basis.*

—**Michael Coutu (Texas)**

# OF BADWATER

*Badwater represents all the dreams, goals and "what ifs" I have in life. It's the quiet voice in my head pushing me to work harder, do better, and exceed all expectations. It's the energy that emboldens me to face my fears and become more than I ever thought possible.*

—**Lisa DeVona (Florida)**

*A dream of a lifetime!*

—**Vitor Bruno Fernandes Rodrigues (Portugal)**

*Badwater means challenging the best, being your best, and bringing your best.*

—**Jonathan Gunderson (California)**

*Badwater is the path to self-discovery. It is the tingle under your skin as you dream of what you are capable of achieving. Badwater is simply observing, interpreting, and recording how individuals relate to one another and to their environments...it's Earth's psychologist!*

—**Walker Higgins (Louisiana)**

*Badwater stands for unity. People cheering and helping each other, leaning on each other, learning from each other. Badwater unites despite increasing headwinds of divisiveness here and around the world, and I couldn't be prouder to be a part of it.*

—**Brian Hill (Texas)**

*Badwater is the ultimate test of the human spirit.*

—**Rhys Jenkins (Wales, UK)**

*Badwater is a family of people who act as a catalyst to change the world through quiet, yet powerful acts of persistence. Their performance during the 48 hour event is only the beginning, the real impact occurs after they finish and tell their story to hungry minds.*

—**Richard Chas Kabanuck (New Mexico)**

*Badwater is what I dream about. If I can do Badwater I can do anything!*

—**Kerri Kanuga (Cayman Islands)**

*Badwater is way more than a race. It is a community that inspires one to be great. Whether it be through athleticism, family or career, Badwater helps one achieve greatness. To reach Badwater, you have to be motivated, organized, positive.*

*The race and its family teaches you the way.*

—**Nick LaBoffe (Ohio)**

*Most people think Badwater is a nightmare. A subset of ultrarunners think it's an inspired dream. Both are right, and that's the genius of it.*

—**Dan McHugh (Colorado)**

*When your Last Will and Testament directs that your ashes be spread out over the Badwater course, that really says it all.*

—**Frank McKinney (Florida)**

*When I think about Badwater, I think about integrity, promise, uniqueness, culture, and a yardstick from which all ultra marathons should follow.*

—**Mark Olson (California)**

*It's a state of mind to me. Its synonymous with digging deep in any situation - when the going gets tough, you go Badwater on the thing.*

—**Claus Rasmussen (Denmark)**

**THE OFFICIAL CHARITIES OF ADVENTURECORPS** are The Challenged Athletes Foundation, Caring House Project Foundation, and Bald Head Island Conservancy. The goal and purpose of our events is to raise funds for, and awareness of, these wonderful and important organizations.



**The Challenged Athletes Foundation** was created on the belief that people of all abilities should have the opportunity to pursue a life full of physical activity and of sports. Be they recreational or in pursuit of a gold medal at the Paralympic Games, people with a physical disability are limited only by their access to funding. Since 1994, CAF has raised over \$76 million—allowing the Foundation to satisfy thousands of funding requests from challenged athletes in all 50 states and across the globe.

Over eighty cents of every dollar raised by CAF provides funding and programs that get challenged athletes into the game. Whether it's a \$2,000 handcycle, helping underwrite a \$15,000 running prosthetic or arranging enthusiastic encouragement from a mentor who has triumphed over a similar injury, CAF's mission is clear: give those with the desire to live active, competitive lifestyles every opportunity to compete in the sports they love.

Since 2002, AdventureCORPS has raised over \$350,000 for CAF, and AdventureCORPS athletes have raised equally impressive sums!

**Website:** [www.challengedathletes.org](http://www.challengedathletes.org)



**The Bald Head Island Conservancy** was founded on Bald Head Island, NC in 1983 with a focus on barrier island conservation, preservation, and education. The Conservancy sponsors and facilitates scientific research that benefits coastal communities and provides numerous recreational and educational activities to the public. In coordination with various organizations, partnerships, and collaborations, the Conservancy has led the nation in conservation and research efforts and is uniquely poised to become a leader in Barrier Island Conservation world-wide.

Badwater fans and race participants will appreciate that BHIC cares for the pristine setting for the Badwater Cape Fear race route and its role as a sea turtle nesting site and sanctuary. The Conservancy also serves as the host and finish line for our event. As such, our goal is to raise \$10,000 to purchase one of the special UTV vehicles which BHIC uses to patrol the beach and care for sea turtle nesting sites.

**Website:** [www.bhic.org](http://www.bhic.org)



Since 2014, AdventureCORPS is proud to recognize **Caring House Project Foundation** as an Official Charity and support their efforts. Founded by ten-time Badwater 135 veteran Frank McKinney, and based on the principal that "stability begins at home," CHPF provides shelter to the world's most desperately poor and homeless by building entirely self-sufficient villages in the poorest county in the Western Hemisphere, Haiti.

As of today 10,616 children and their families have been provided with a new concrete home, and countless more are alive because of CHPF's efforts. In 2017 CHPF completed its 24th self-sufficient village in Guimbi, Haiti. That's right, 24th self-sufficient village in 21 Haitian cities in last 14 years! Visit [www.chpf.org](http://www.chpf.org) to support Frank's efforts. Thank you for all you do, Frank and Nilsa!

**Website:** [www.chpf.org](http://www.chpf.org)

## ENVIRONMENT

AdventureCORPS events happen not in a man-made stadium, but in the real world “out there.” We care deeply about the natural world for we are intrinsically linked with it and because we want to enjoy these events in their awesome natural settings for a long, long time.

As such, we joined One Percent For The Planet on July 1, 2008,



a growing global movement of more than 1200 companies that donate at least 1% of their sales to a network of more than 3600 approved environmental organizations worldwide. Therefore we donate at least 1% of total revenues (in other words, “off the top,” not just 1% of profit) to environmental causes. This is in addition to all the work we do on behalf of, and donations we make

to, Challenged Athletes Foundation, Major Taylor Association, and Caring House Project Foundation, which are wonderful causes but not environmental in their focus. In the past ten years, we and our fellow One Percent For The Planet members have invested over \$100 million in positive environmental change.

In association with our membership in One Percent for the Planet, we have supported The Conservation Alliance since September, 2008. The Conservation Alliance is an organization of



outdoor businesses whose collective contributions support grassroots environmental organizations and their efforts to protect wild places where outdoor enthusiasts recreate. Alliance funds have played a key role in protecting rivers, trails, wildlands and climbing areas throughout North America.

Membership in the Alliance is open to companies representing all aspects of the outdoor industry, including manufacturers, retailers, publishers, mills and sales representatives. The result is a diverse group of businesses whose livelihood depends on protecting our natural environment. Since its inception in 1989, the Alliance has contributed close to \$13 million to grassroots conservation groups throughout North America. The results of our funding have been remarkable. Alliance funding has helped to save more than 44 million acres, protect 2,945 miles of rivers, stop or remove 26 dams, and purchase 10 climbing areas. There are now more than 190 member companies, and plans to disburse \$1.65 million in 2015.

In 2014, we began supporting the Bald Head Island Conservancy with the inaugural BADWATER Cape Fear race by focusing attention on the race route’s



pristine setting as a sea turtle nesting area and BHI’s role as a leader in barrier island conservation, preservation and education.



Additionally, we have championed other environmental causes including the Los Angeles County Bicycle

Coalition, a nonprofit organization with over 1,000 members that engages cyclists through advocacy, education and outreach across the county. Founded in 1998, LACBC brings together the diverse bicycling community in a united mission to improve the bicycling environment and quality of life for the entire region. In 2011, we donated \$10,000 to LACBC to initiate and sponsor the Jim Swarzman Memorial Membership Drive, an effort that brought \$23,000 into LACBC.

AdventureCORPS joined the Death Valley Natural History Association as Life Members and recognized DVNHA as an Official Charity of AdventureCORPS from 2009 through 2013. DVNHA is a non-profit organization supporting education, research, and preservation in Death Valley National Park and Ash Meadows National Wildlife Refuge. Some of their efforts include DeathValley R.O.C.K.S. (bringing inner city kids to experience one of the largest outdoor classrooms in the world), Devil’s Hole Pupfish Recovery, Death Valley All Taxa Biological Inventory, plus they run the wonderful gift shops in the Park.



According to DVNHA, AdventureCORPS has paid for, at the minimum, “every need (sleeping bags, cooking fuel, transportation) for one Death Valley ROCKS school group (50-60 students, chaperones, and teachers) every year since 2009.” AdventureCORPS athletes have also supported this and other DVNHA causes! Additionally, through DVNHA, AdventureCORPS and our athletes have donated \$5000 to support the recently renovated Death Valley National Park Visitors Center, as evidenced by five “donor tiles” are in the Visitors Center (one per \$1000 donation.)

The hottest, driest and lowest non-profit in the U.S.

# INSPIRING A PASSION

*for Death Valley and Ash Meadows*

Since 2009, AdventureCorps participants have contributed over \$20,000 to DVNHA in support of Death Valley National Park programs. To make a donation or shop with us online please visit [dvnha.org](http://dvnha.org).



Photos, clockwise from top left: Mosaic Canyon, Kimber Moore; Backwater Salt Pan, Tim Kendzioriski; Devils Hole Pupfish, Kimber Moore; Ash Meadows collage, Tim Kendzioriski; Twenty Mule Team (historic), NPS.

Preserving and interpreting the natural and cultural resources of the Death Valley region in cooperation with our government partners: Death Valley National Park and Ash Meadows National Wildlife Refuge.



(800)478-8564  
[dvnha.org](http://dvnha.org)

**Bookstore Locations:**

- Furnace Creek Visitors Center
- Stovepipe Wells Ranger Station
- Scotty's Castle Museum (temporarily closed)
- Ash Meadows NWR

All proceeds benefit education and research in Death Valley National Park and Ash Meadows National Wildlife Refuge. Please visit us next time you are in the park or shop with us online at [dvnha.org](http://dvnha.org)



**SAVE THE DATE!**

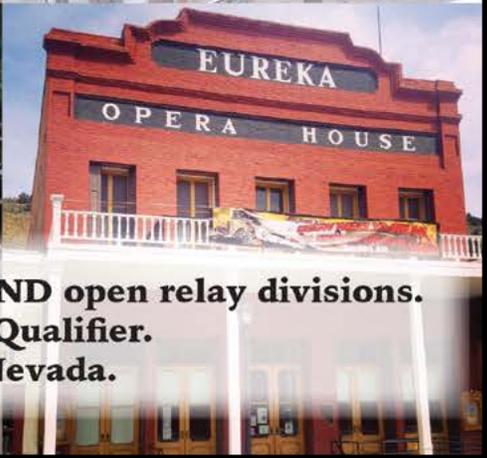
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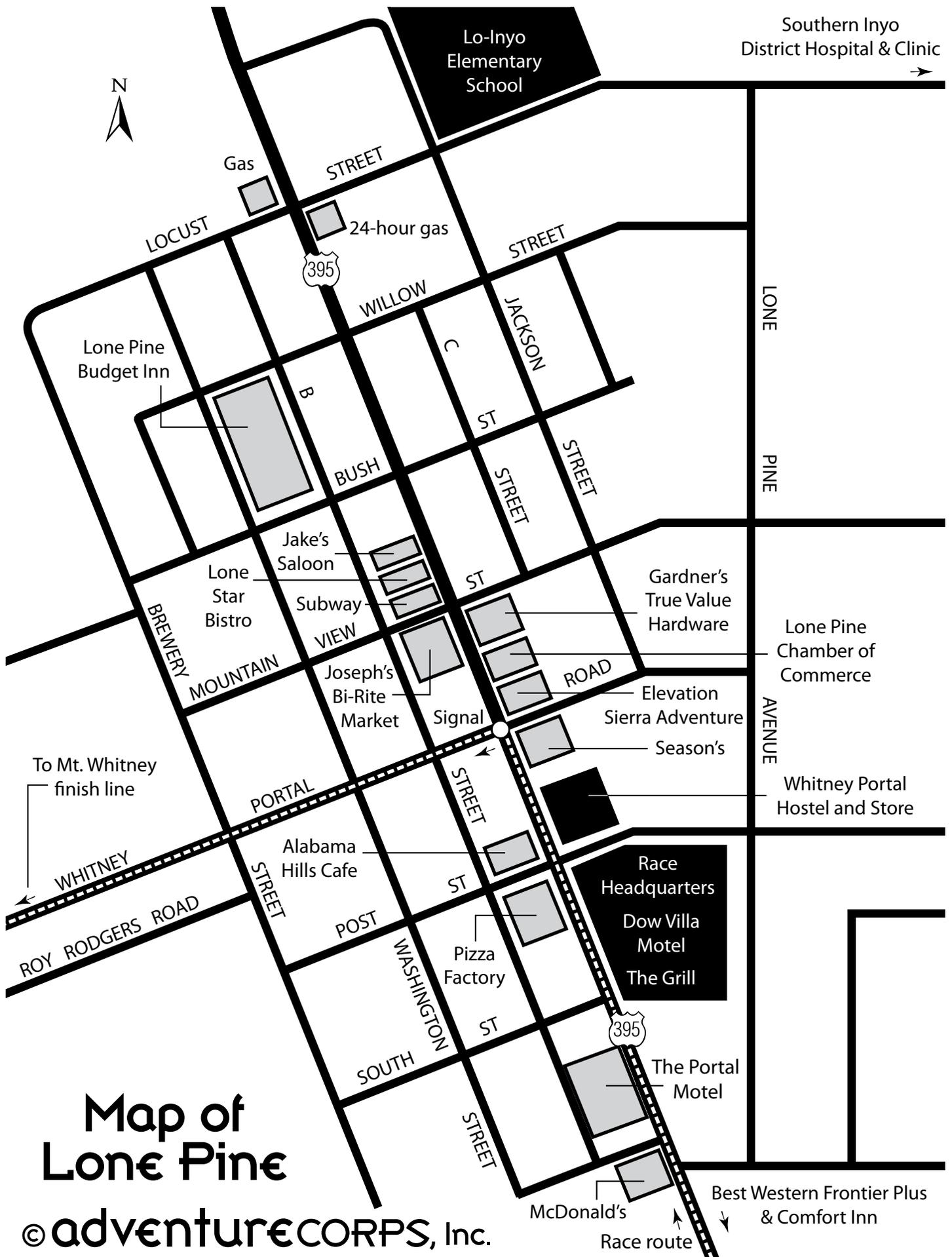


**SAVE THE DATE!**

**508-mile bicycle race**  
**September 13 - 15 (Friday - Sunday), 2019**  
**"The Toughest 48 hours in Sport"**  
**The world's premier 48-hour ultra cycling race.**



**Solo, two-person and four-person stage relay AND open relay divisions.**  
**Race Across America (RAAM) Qualifier.**  
**Starts and finishes in Reno, Nevada.**



Southern Inyo District Hospital & Clinic

Lo-Inyo Elementary School



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Lone Pine Budget Inn

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STREET

LONE

PINE

Lone Star Bistro

Jake's Saloon

Subway

ST

Gardner's True Value Hardware

Lone Pine Chamber of Commerce

BREWERY MOUNTAIN

VIEW

Joseph's Bi-Rite Market

Signal

ROAD

Elevation Sierra Adventure

Season's

AVENUE

Whitney Portal Hostel and Store

To Mt. Whitney finish line

PORTAL

STREET

Alabama Hills Cafe

ST

Race Headquarters

Dow Villa Motel

The Grill

ROY RODGERS ROAD

WHITNEY

POST

ST

WASHINGTON

ST

STREET

SOUTH

STREET

STREET



The Portal Motel

McDonald's

Race route

Best Western Frontier Plus & Comfort Inn

# Map of Lone Pine

© adventureCORPS, Inc.

## Lone Pine: Quick Reference to the Most Popular Places for Badwater Folks

Lone Pine is located at Mile 122 of the Badwater 135 race route and is an important hub of activity before, during, and after the race. Located at 3727 feet (1136m) at the foot of Mt. Whitney and with a population of just over 2000 friendly people, it is a wonderful and appealing destination year-round and particularly important to the success of the Badwater 135.

Lone Pine meets every need, from great food to comfortable hotels, plus all enjoy the Post-Race Get-Together at the school, followed later by the traditional social hour(s) at Jake's Saloon. We hope you enjoy the town, spend lots of money there, and let everyone know how much you enjoy racing in their back yard!

Many Badwater 135 runners and crews buy race equipment and supplies at True-Value Hardware or Whitney Portal Hostel and Store, groceries at Joseph's Bi-Rite, purchase moderately priced gas in town, and/or excellent coffee, snacks, and sandwiches at Lone Star Bistro, get an excellent meal at The Grill or enjoy fine dining at Seasons Restaurant.

During the race, many support teams will go into town to pick up coffees and more at Lone Star Bistro, pizza from The Pizza Factory, to-go food from The Grill or Lee's Frontier Deli, or for ice, water, & groceries.

**Motels / Hotels (Not a complete list! See LonePineChamber.org for more listings!)**

<b>Best Western Frontier Hotel</b>	
1008 S Main Street	760-876-5571
<b>Comfort Inn</b>	
1920 S Main Street	760-876-8700
<b>Dow Villa Motel</b>	
310 S Main St <i>(Race HQ)</i>	760-876-5521
<b>Portal Motel</b>	
425 S Main St	760-876-5930
<b>Whitney Portal Hostel (and Store)</b>	
238 S Main St	760-876-0030

**Popular Eateries**

<b>Lone Star Bistro</b> at 107 N Main St (Coffee drinks, sandwiches, pastries, ice cream, smoothies, and such, plus WiFi. Very popular with PCT hikers.)	
760-876-1111	Open 7am-5pm daily
<b>The Grill</b> at 446 S Main St. (Located on the southern end of the Dow Villa parking lot. Great food and great location!)	
760-876-4240	Open 7am-9pm daily
<b>Alabama Hills Cafe</b> at 111 W Post S	
760-876-4675	Open 6am-2pm daily

**Pizza Factory** at 301 S Main St  
760-876-4707 Open 11am-10pm daily

**Season's Restaurant** at 206 S Main St  
760-876-8927 Open 5pm-10pm daily

**Jake's Saloon** at 119 N Main St (Many runners and crews socialize here after attending the official post-race pizza party at the Lo-Inyo Elementary School at the conclusion of the race!)

**Groceries, Gas & Mini-Mart, Outdoor Outfitters, Hardware**

**Whitney Portal Store and Hostel** at 238 S Main St  
760-876-0030 Open 7am-9pm daily in July

**Elevation Sierra Adventure** at 150 S Main St  
760-876-4560 Open 9am-630 or 7pm daily

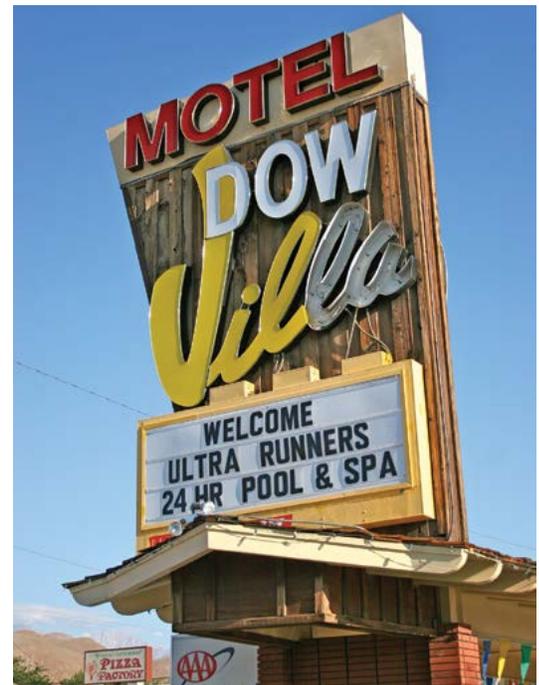
**Joseph's Bi-Rite Market** at 119 S Main St  
760-876-4378 Open 8am-9pm daily

**Gardner's True Value Hardware** at 104 S Main St  
760-876-4208 Open 8am-6pm, Mon-Sat

**L.P. Chamber of Commerce** at 120 S Main St  
760-876-4444 Open 830am-430pm daily

**Chevron & Lee's Frontier Deli** at 1900 South Main St (This is the last business on the west side of the road on the far southern end of town. Many crews call ahead to order sandwiches as they approach town, or if making a quick run into town from the race route.)  
760-876-5844 Gas 24/7; Deli closed 2-4am only

**Exxon-Mobil & AM-PM** at 380 North Main St  
760-876-4073 Open 24 Hours a Day



## COURSE DESCRIPTION AND ELEVATION PROFILE

### Badwater Basin, Death Valley (- 85m / 280ft)

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

### Furnace Creek Ranch (-170'), Mile 17.5 (Time Station #1)

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

### Stovepipe Wells (Sea Level), Mile 42.2 (Time Station #2)

A small general store, gas station, restaurant and motel. Location of the race's Medical HQ for most of first 15 hours of the race. Stock up here!

### Towne Pass (4956'), Mile 58.7

17-mile long ascent with 5000' of elevation gain, then a 10-mile long descent with 3000' feet of elevation loss into the Panamint Valley. 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 (2000'), Mile 72.7 (Time Station #3)

Gas station / mini-mart, plus restaurant and motel. We rent out "The Cottage" as a way station for any and all race entrants and crews to use during the race: Bring your own towel, soap, and shampoo and make a big effort to keep the room and bathroom tidy. After passing Panamint Springs, 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, and ONLY park in the eight designated parking zones between Panamint Springs Resort and unmarked "Panamint Pass" at mile 84.9.

### Father Crowley's Turnout (4000'), Mile 80.65

The bathrooms and parking lot that designate this view point are not the top of this ascent, though you may hope so. The road continues to rise to 5000' over rolling hills, then eventually descends into the Owen's Valley.

### Darwin Turn-Off (5050'), Mile 90.6 (Time Station #4)

Just a few miles to the south of our route is the small inhabited ghost town of Darwin, the website for which touts "NO broadcast TV; NO AM/FM radio, NO cell signal; NO stores; NO restaurants." This is where the race usually starts to get serious for all entrants. Look for Mile Marker 28 about nine miles ahead to indicate your 100-mile mark!

### Keeler (3610'), Mile 108.1

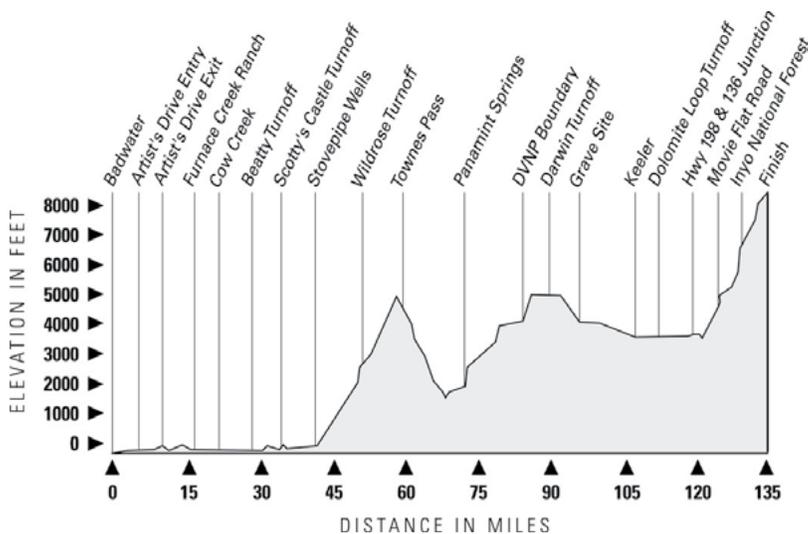
This is a small mining town with no facilities which abuts the Owens Dry Lake Bed the left of the highway. Amazing views of Mt. Whitney and the Sierra Nevada abound. A dirt road to the right ascends to Cerro Gordo, an authentic ghost town which was featured in the 2014 Badwater 135 and will be featured again in the upcoming "Badwater@ Cerro Gordo" 102-mile Ultramarathon.

### Lone Pine (3610'), Mile 122.7 (Time Station #5)

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 Race Headquarters at the Dow Villa. Restock here for the climb to Whitney Portal. Turn left onto the Whitney Portal Road to begin the final leg, the longest and steepest climb of the race (13 miles with 5000 feet of elevation gain). After the turn from Hwy 395, it's 8.4 miles to Time Station #6, located at the start of the switchbacks. Temperatures will steadily decrease during the ascent (though depending on time of day). Be prepared with extra layers of clothing and rain gear the final few miles; at night it can approach freezing temperature. Be sure your support vehicle is always parked completely off of the road and that you do not block traffic, even for a moment.

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

Congratulations! You have finished the world's toughest foot race! A small diner/shop are open during daylight hours. There is also a stocked fishing pond and a campground (because, of course, after running 135 miles, you really want to go fishing and camping!).



### TOILET LOCATIONS ALONG THE ROUTE

- 14.5 Golden Canyon (top end of parking lot; right side of road)
- 17.6 Furnace Creek Gas Station (left side of road)
- 40.2 Sand Dunes Parking lot (right side of road)
- 42.2 Stovepipe Wells Gas Station (right side of road)
- 51.2 Wildrose Station (parking lot on Towne Pass; right side of road)
- 72.7 Panamint Springs Resort (left side of road)
- 80.6 Father Crowley's Point (right side of road)
- 121-122.8 Various location along Hwy 395 in Lone Pine (restaurants and hotels)
- 135 Mt. Whitney Portal / Finish Line

# You're doing Badwater. Don't let Badwater do you.

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SO WE DON'T USE THEM.**



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**BADWATER**  
**ONE THIRTY FIVE**  
The Challenge of the Champions

# BADWATER ULTRAMARATHON

The Challenge of the Champions

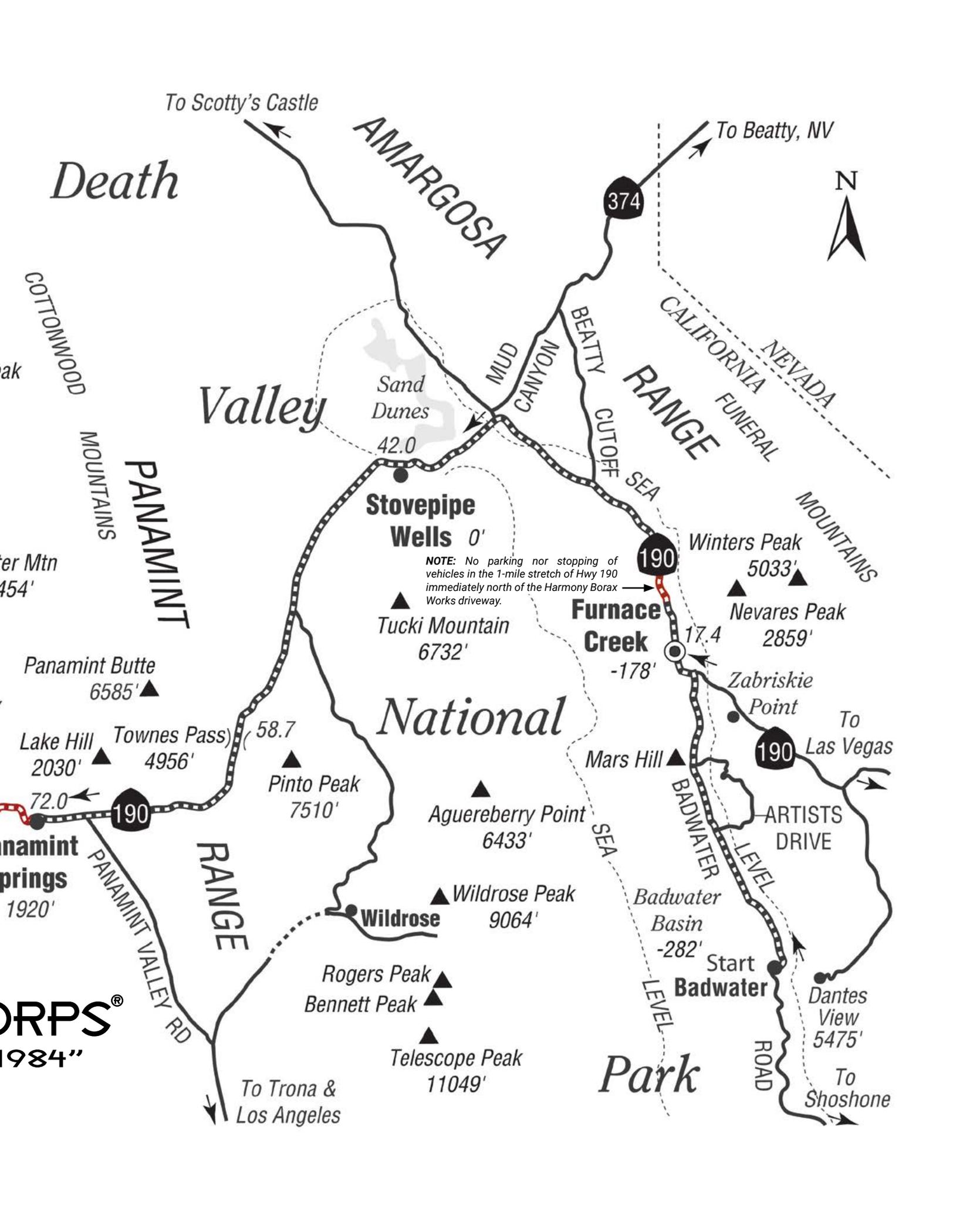


**NOTE:** Between Panamint Spring and Panamint Pass, support vehicles may only park in eight designated locations, as described in the text version of the route sheet. Also, on this stretch of the route, crew members—other than pacers—may NEVER cross the highway; only pacers and racers may cross the highway.

adventureco

"Out There Since 1968"





# Official Race Routes

	LANDMARK	Dist. (MI)	Ele. (FT)	MARKER
<i>NOTE: TL = Traffic Light; SS = Stop Sign; T-Int = T-Intersection; Jct. = Junction</i>				
	Badwater Basin: Head north	0	-282	
<i>Crews will be held for 10 minutes after each wave begins, then released in small batches.</i>				
	Former location of Telescope Peak Sign on L.	1.8	-200	
	Wide Shoulder on Right	3.1		
	<i>Natural Bridge turnoff on R (PACERS MAY JOIN AGE 65+ RUNNERS HERE)</i>	3.5	-170	MM 13
	Wide Shoulder on R.	3.9		
	Devil's Golf Course on L.	5.6	-165	
	Artist's Drive entry on R.	8	-165	
	West Side Road on L.	10.6		MM 6
	Artist's Drive exit on R.	11.7	-70	
	Mushroom Rock on R.	12.1	-170	MM 5
	Golden Canyon on R. (45 MPH) (TOILET)	14.5	-165	
	Jct. Hwy 190 & Badwater Rd. (SS): Go Left onto 190 north (Cell Service Begins)	16.5	0	
<i>Watch Speed Limit! (Don't be like that Aussie team in 2015!)</i>				
	Timbisha Shoshone Reservation on L.	17.2	-140	
	The Oasis (Furnace Creek Ranch) on L.: <b>General Store open until 300am</b> (TOILET)	17.5	-165	
<i>Park in lots, not along roadway, throughout Furnace Creek!</i>				
	Furnace Creek Fuel on L. (Time Station #1 located here.) (TOILET)	17.6		
<i>Dumpsters available to dump garbage and recycling at Gas Station.</i>				
	Park Service Visitor's Center on L. (Please use running path on left of roadway)	17.7	-165	
	Furnace Creek Campground on L.	17.8	-170	
	Harmony Borax Works on L.: <i>Park here and let runner go ahead</i> (45 MPH)	18.2	-170	
<i>NO STOPPING, SLOWING, or PARKING NEXT 1 MILE! Drive to beyond curves!</i>				
	<i>Parking allowed beyond curvy section, where safe.</i>	20.1	-100	
	Cow Creek on R.	20.8		
	1st Marathon	26.2		
	Daylight Pass Rd. on R. (Cell Service Ends)	28.4		MM 99.5
	Salt Creek turnoff on L.	30.8		MM 97.5
	Sea Level sign on R.	31.5	0	
	Sea Level sign on L.	32.1	0	
	"Summit" / end of rolling hills section	33.7	140'	MM 94.5
	North Hwy / Scotty's Castle turnoff on R.	34.9		MM 93.5
	Sea Level sign on L.	35.4	0	
<i>MINIMAL PARKING NEXT 6 MILES! SOFT SHOULDERS. Do not get stuck in sand.</i>				
	Devil's Cornfield sign on R.	36.3	-80	MM 91.5
	Small Parking Area on R. (Space for 2-3 cars only)	37.1		
	Camera Sign pullout on R. (Space for 4-5 cars only)	37.5		
	Sand Dunes Parking Lot on R. (35 MPH) (TOILET)	40.2	0	
	Approaching Stovepipe Wells (Cell Service Begins)	41	0	
	Stovepipe Wells Village Welcome sign: <b>Gas / Food / Store opens at 400am!</b>	42	0	
	Time Station #2 & Medical HQ on L. by hotel courtyard & flag. (TOILET)	42.2		
<i>(PACERS MAY JOIN RUNNERS OF ANY AGE HERE.)</i>				
<i>It's a long climb, and a long way, to Panamint Springs, 30 miles away! Be ready!</i>				
<i>It is CRITICAL to stock up on water, ice, and snacks, plus real food for the crew!</i>				
<i>Also, take advantage of the low gas prices while you are here!</i>				
	Mosaic Canyon turnoff on L.	42.4	5	
	1000' Elevation sign on R. (65 MPH)	46.8	1000	
	Short downhill (Cell Service ends along the ascent of Towne Pass)	47.2		
	DIP Sign on R. (Do NOT park in dips as you will be invisible!)	48.5		
	2000' Elevation sign: <b>All racers must pass this location before 1000am</b>	50.7	2000	MM 77.5
	Wildrose Station parking lot on R. (TOILET)	51.2	2450	
<i>Please park neatly and use designated spaces. Don't park "haphazardly."</i>				

LANDMARK	Dist. (MI)	Ele. (FT)	MARKER
Wildrose Turnoff on L.	51.4	2500	MM 76.5
2nd Marathon	52.4	2800	MM 75.5
3000' Elevation sign on L.	53.6	3000	
4000' Elevation sign on L.	56	4000	
DIP sign on R. (Do NOT park in dips as you will be invisible!)	56.4		
Approaching the summit of Towne Pass (30 MPH)	57.25		MM 70.5
Brake Check parking area on R.	58.9	4965	
Towne Pass Summit sign on R.	59	4965	
"Downhill Next 9 Miles - 9% Grade" - Begin descent into Panamint Valley	59.6		
4000' Elevation sign on R. (55 MPH)	61.8	4000	
Vista Point (amazing view of Mt. Whitney!) / big gravel pullout on R.	62	3500	
Paved pullout on L.	62.5		
Gravel pullout on L.	63.7		MM 64.5
3000' Elevation sign on L.	64.1	3000	
Large Paved pullout on L.	65.3		
2000' Elevation sign on L. (65 MPH)	66.4	2000	
Panamint Dry Lake Bed, east edge; "Soft Shoulder" sign	68.4	1640	
Panamint Valley Road to Trona / Ridgecrest on L.	70.2	1750	
Panamint Springs Resort: Gas / Mini Mart / Food / Hotel (35 MPH). (TOILET)	72.7	1970	
Time Station #3 on L. at resort hotel, NOT at gas station			
<b>All racers must pass TS3 before 800pm, Tuesday night</b>			
Free Showers and Flush Toilets across street at campground!			
Get water, ice, snacks, and more at Gas Station / Mini Mart!			
Get REAL FOOD at the Resort			
WARNING: Parking only allowed in designated locations for next 12.2 miles: follow odometer closely!			
Also watch for our "Badwater Parking Zone" signs.			
2000' Elevation sign on L. (55 MPH)	73.3	2000	
Darwin Falls turnoff on L. / "Rock Slide Area" sign on R.	73.7	2500	
<b>Parking Allowed on R. in gravel pullout with yellow left arrow (1.8 from PSR)</b>	74.5		MM 53.5
<b>Parking Allowed on R. in small gravel pullout on right (3.4 from PSR)</b>	76.1		
3000' Elevation sign on L. (end parking allowed zone)	76.2	3000	
<b>Parking Allowed on R. in large gravel shoulder on right (4.7 from PSR)</b>	77.4		
<b>Parking Allowed in large gravel pullout on L. before left curve (5.3 from PSR)</b>	78		
3rd Marathon at 25 MPH sign with sharp left curve arrow	78.6	3400	MM 48.5
4000' Elevation sign on L.	80.55	4000	
Father Crowley's Point on R. (Toilet) <b>Parking Allowed in lot (7.9 from PSR)</b>	80.6	4000	
Please no sleeping on the ground in parking spaces! (TOILET)			
<b>Parking Allowed in elevated gravel pullout via small drive on R. (8.7 from PSR)</b>	81.4		
<b>Parking Allowed in wide gravel pullout on R. (35 MPH) (10.5 from PSR)</b>	83.2		MM 44.8
Summit (no sign) <b>Parking Allowed in large gravel pullout on R. (12.2 from PSR)</b>	84.9		
65 MPH sign on right, just beyond parking zone	85		
Support vehicles may resume parking wherever it is safe to do so from here onwards.			
Death Valley National Park sign on L. (65 MPH)	85.4	4200	
Saline Valley Rd. on R. (actual DVNP boundary)	86.4	4800	
"Adopt a Highway" sign on R.	88.6		MM 39.5
Darwin turnoff on L.: Time Station #4 on Left before turnoff	90.6	5050	MM 37.5
<b>All racers must pass TS4 before 500am, Wednesday morning</b>			
Gravesite on right (white cross)	96.8	4100	
"Rock Slide Area"	99.8		
One hundred miles! (culvert under road)	100	4050	MM 28*
* MM 28 is exactly at the 100-mile mark, but is on the LEFT side of the road, facing the opposite direction.			
4000' Elevation sign on R. before "Gunsite Notch" (Cell Service Begins)	102.2	4000	

LANDMARK	Dist. (MI)	Ele. (FT)	MARKER
Jct. Hwy 136 & Hwy 190: Go straight / north onto Hwy 136 "Lone Pine 19mi"	103.4	3935	
<b>SOFT SHOULDERS NEXT EIGHT MILES: BE CAREFUL! DO NOT GET STUCK!</b>			
4th Marathon	104.8	3800	MM 16.5
"100 Sulfate Road" sign	106.5		
Keeler City sign at Cerro Gordo Rd. on R.	108.1	3610	
Adopt-a-Highway sign on R. after solar panel array	109.1	3605	
Dolomite Loop Road on R.	113.2	3600	
Dolomite Loop Road on R.	117.5	3510	
Cross Owens River: View of Whitney Portal Rd. is straight ahead!	118.3	3500	
Jct. Hwy 136 & Hwy 395: Go Right / North	121	3696	
<b>Runners may run on right side of road into and through Lone Pine: stay well away from traffic lane.</b>			
<b>WARNING: SPEED LIMITS DROP TO 25mph as you pass through town!</b>			
Comfort Inn on R. (45 MPH)	121.1		
Chevron / Lee's Frontier Deli / Mini Mart (Great sandwiches!) on L. (TOILET)	121.3		
Best Western on R. (35 MPH)	122		
Lone Pine City Limits sign on R. (25 MPH)	122.3		
McDonald's on L. (TOILET)	122.6	3610	
Dow Villa on R.: Time Station #5 & Medical HQ (TOILET)	122.7	3610	
<b>All racers must pass within 42 hours of their individual wave start!</b>			
<b>All racers with time penalties must "check in" and serve penalty time here before continuing.</b>			
Portal Road (the only traffic light in Lone Pine): Go left	122.8	3610	
Tuttle Creek turnoff on L.	123.3	3770	
<b>WARNING: Park and Drive Properly! NO slow driving; NO stopping in roadway!</b>			
Los Angeles Aqueduct	123.4	3855	
Lone Pine Creek	124.5	4200	
Movie Flat Road on R.	125.5	4590	
<b>WARNING: Park and Drive Properly! NO slow driving; NO stopping in roadway!</b>			
Lone Pine Creek	125.7	4800	
Horseshoe Meadow turnoff on L.	125.9	5000	
Cuffe Ranch turnoff on R.	127.1	5100	
<b>WARNING: Park and Drive Properly! NO slow driving; NO stopping in roadway!</b>			
Whitney Vista Drive on L	127.4		
Olivas Ranch Road on L.	128.4	5300	
"Entering Active Bear Area"	129.2		
<b>WARNING: Park and Drive Properly! NO slow driving; NO stopping in roadway!</b>			
Lone Pine Campground on L.	129.3	5700	
Lone Pine Creek	129.6	6000	
"Inyo National Forest" sign on R. (Sign was missing in May, 2015)	129.8	6400	
5th Marathon at Indian Creek Rd. on R.	131	7000	
Time Station #6 in Large gravel pullout on R.	131.1	6890	
Road makes a 180-degree switchback to L.	132	7215	
Vista Point on Left at large gravel pullout	132.8	7400	
"Campsites 39-44" and "Whitney Portal Recreation Area" signs	133.7	7700	
<b>WARNING: Park and Drive Properly! NO slow driving; NO stopping in roadway!</b>			
Meysan Lakes trailhead on L.	133.9	8035	
Family Campground on L.: Support vehicles should drive ahead to park!	134	8100	
Overflow Parking Lot on L.	134.6	8200	
Finish Line of the World's Toughest Foot Race: <b>Congratulations!</b>	134.7	8360	

Mile Markers (MM) noted are on R. side of road and within 2/10 of a mile of their stated location. For reference only. Official distance is 135.0 miles. Remember all car odometers have error. Distances above were GPS-measured and are accurate in a relative sense.

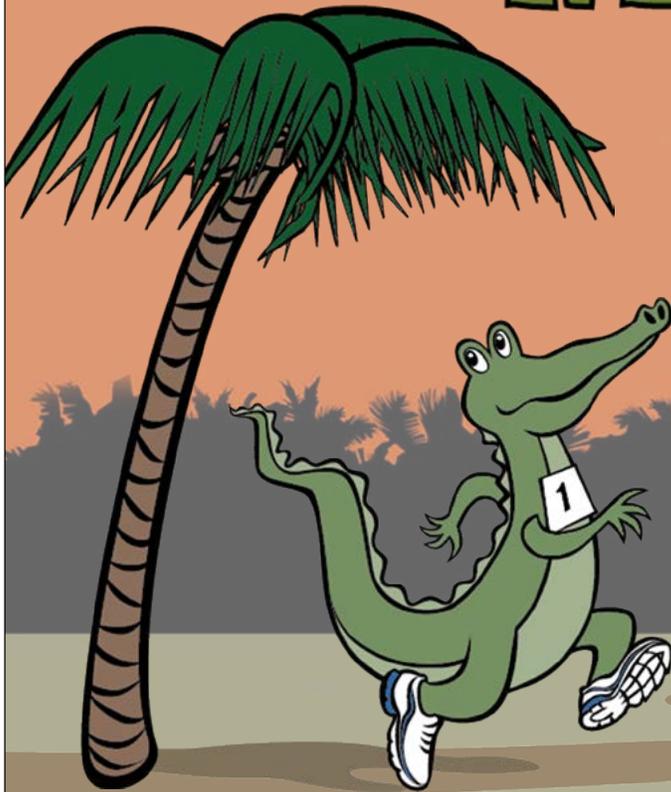
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# THE DANGERS OF RUNNING IN THE HEAT

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

	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					

## 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.

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# THE DANGERS OF HOT WEATHER RUNNING

## *DEHYDRATION, HEAT CRAMPS, HEAT EXHAUSTION, HEATSTROKE & HYPONATREMIA*

By Claudio Piepenburg  
(Originally published by Road Runner Sports)

Michael Jimenez gets a cooling spray from his perfectly placed "pacer," Peter Fish.

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

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."



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

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](mailto:cpiepe@roadrunnersports.com).*

## Medical Risks in the Badwater Ultramarathon



2011 champ Oswaldo Lopez stays cool during the 2013 race.

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.

HEAT EXHAUSTION		OR	HEAT STROKE		
Faint or dizzy			Throbbing headache		
Excessive sweating			No sweating		
Cool, pale, clammy skin			Body temperature above 103° Red, hot, dry skin		
Nausea or vomiting			Nausea or vomiting		
Rapid, weak pulse			Rapid, strong pulse		
Muscle cramps			May lose consciousness		
<ul style="list-style-type: none"> <li>• Get to a cooler, air conditioned place</li> <li>• Drink water if fully conscious</li> <li>• Take a cool shower or use cold compresses</li> </ul>			<p><b>CALL 9-1-1</b></p> <ul style="list-style-type: none"> <li>• Take immediate action to cool the person until help arrives</li> </ul>		
@NWSSacramento weather.gov/Sacramento				@SacramentoOES SacramentoReady.org	

### The Official Race Rules

1. There are three starting times for the 2019 Badwater Ultramarathon (800pm, 930pm, and 1100pm on July 15, 2019), but all racers in all groups are competing in the same race. Runners must check in at the start line, ready to race, 30 minutes prior to their start time.

2. 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.

3. The number bib must be worn by the racer 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. The Pacer Bib must also be worn by any pacer / crew member who is running along with his or her racer.

4. All runners MUST have passed, and be proceeding beyond, the following locations along the race route within the specified time cut-offs:

- Mile 50.5 (2000' Elevation Sign, located 8.6 miles beyond Stovepipe Wells): All runners must pass by 1000am, Tuesday morning (regardless of starting wave).

- Mile 72 (Panamint Springs Resort): All runners must pass by 800pm, Tuesday night (regardless of starting wave).

- Mile 90 (Darwin Turn-Off): All runners must pass by 500am, Wednesday morning (regardless of starting wave).

- Lone Pine at Mile 122: Within 42 hours, based upon start time. Additionally, beyond the Darwin Checkpoint, 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. Runners who fail to meet the specified time cut-offs along the course must withdraw from the race course; similarly, runners who are disqualified from the race must also withdraw from the race course. Such runners may not continue on the race course "unofficially" or after simply removing their bib number. Crew members from withdrawn runners must also depart the race course, unless they formally join another runner's crew.

6. 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.

7. 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).

8. Racers must make their presence known at all Time Stations located along the route.

9. As it has since 1989, the race ends at Mt. Whitney Portal. If any entrant or crew member chooses to hike on the Mt. Whitney Trail, official race logos must not be worn and the appropriate permits must be obtained from the Forest Service.

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

11. 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. "Badwater®" is a federally registered trademark and may not be used in any commercial or promotional manner except under license from AdventureCORPS, Inc. In particular, t-shirts (such as for crew members) may not state "Badwater" or feature any version of the race logo.

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

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

4. Each Runner's Support Crew must have a designated Crew Chief and his or her name and email address must be provided to the race organizers at least eight weeks before the race. All crew chiefs must study all race rules and information about supporting a runner and organizing and overseeing a support team, as well as study all email correspondence sent by the race organizers. Each Crew Chief is to be primarily responsible for managing the support crew, maintaining adherence to all race rules, state and local laws, and common sense, as well as overseeing the Health and Safety of all crew members and the runner at all times.

5. The names and email addresses of all support crew members must be provided at least four weeks before the race (preferably eight weeks.) All crew members must study all race rules and information about supporting a runner and organizing a support team, as well as study all email correspondence sent by the race organizers.

6. Each runner is strongly encouraged to bring a nurse, EMT, MD or other first responder or medical professional on his or her support team.

7. Each runner is strongly encouraged to bring at least one crew member or Crew Chief who is a veteran runner, crew member, or Crew Chief with Badwater 135 experience.

8. Each racer is strongly encouraged to carry a walkie-talkie for communicating with his or her support crew. This is particularly

encouraged for the Father Crowley ascent, between Panamint Springs at Mile 72.7 and Panamint Pass at Mile 84.9.

9. 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.

10. 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.

11. All racers and all designated Crew Chiefs must attend Racer Check-In, while all crew members are encouraged to attend. Additionally, all racers and their designated Crew Chiefs ONLY must attend the Pre-Race Meeting. Those racers and/or their Crew Chiefs who do not complete the scheduled check-in and attend the Pre-Race Meeting will not be allowed to participate. Attendance is mandatory: no exceptions will be made.

12. All racers must be willing to submit to a drug urine test before (at any point prior to the race, after being officially confirmed for entry), during (at any time), or after the race (up to 90 days after the conclusion of the race). If any WADA banned substances are detected, the racer will be disqualified from competition, listed as DISQUALIFIED FOR DOPING in the final standings of the race, and banned for life from any AdventureCORPS event. Refusal to submit a urine specimen upon demand will also result in the racer being disqualified from competition, being listed as DISQUALIFIED FOR DOPING in the final standings of the race, and being banned for life from any AdventureCORPS event. Additionally, any Badwater 135 finisher who fails a drug test within 36 months after competing in any edition of the Badwater 135 will be retroactively disqualified from any and all previous Badwater 135 races, removed from all Badwater 135 race results, as well as banned for life from any AdventureCORPS events.

13. 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.

14. During Racer Check-In, all entrants must display a minimum of four satisfactory reflective vests - or 360 degree reflective belts - 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.

15. During Racer Check-In, all racers must display one OSHA Class 2 reflectivity garment for each crew member to wear during the day, and one OSHA Class 3 reflectivity garment for each crew member to wear during the night (or one OSHA Class 3 reflectivity garment for each crew member to wear 24 hours a day). See point 4 under

“Support Crew & Assistance” below.

16. During Racer Check-In, all racers must show that they have at least eight personal portable toilet products such as the Biffy Bag for use on the race course wherever toilets are not available. (Ziplock bags or dog poop bags are NOT acceptable.) Such products must be used discreetly and must be disposed of properly after use. Public and/or unsanitary defecation by racers or crew members will result in disqualification of the racer.

17. All racers and crew must pay the Death Valley National Park Entrance Fee for each of their support vehicle(s). 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.

18. No commercial photography or videography may be conducted at the race without the specific written permission of AdventureCORPS, Inc. Additionally, the National Park Service, California Department of Transportation and/or the U.S. Forest Service may also require payment of a filming fee and signature of a filming agreement. Also, bona fide media must contact AdventureCORPS, Inc. to request a media credential.

19. PHOTO / VIDEO REGULATIONS WITHIN DEATH VALLEY NATIONAL PARK

The National Park Service regulates photography and videography that is considered commercial in nature. (The NPS had jurisdiction over the first 85 miles of the race route; the final 50 miles of the race route are outside DVNP jurisdiction. Therefore photos and videos shot over the last 50 miles of the race route – Darwn, Keeler, Lone Pine, Portal Road, and finish line – are not governed by NPS regulations.) In simple terms, this means the following:

- Photo / video for personal use, including posting to runners’ and crew members’ social media accounts, websites, and similar is not regulated, so long as it is conducted in a safe manner and according to the rules of the race, the motor vehicle code, and the NPS special event permitting guidelines. No permit is required for personal use.
- Photos / video which is being shot to provide to sponsors of runners to be used by the sponsors in a promotional purpose IS regulated and may require a Commercial Filming Permit. Said permits have an up-front \$210 fee and may likely also require Ranger Monitoring. Any monitoring costs would likely be fractionally shared by all those who are required to have a Commercial Filming Permit, and will be billed after the event.
- If you or your crew members will be shooting photos and/or video to provide to your sponsor(s), you likely require a Commercial Filming Permit and thus should contact the Special Park Uses office at Death Valley National Park at least 30 days before the event to inquire.
- All those who are required to obtain a Commercial Filming Permit,

as well as all bona fide media, must also attend the Media Check-In and Briefing prior to the race.

### Support Crew and Assistance

1. Each racer must be accompanied by a support crew comprised of no more than one four-wheeled motor vehicle and at least two and no more than four crew members - at least two of whom are legally licensed to drive and at least one of whom can speak English - at all times. Race entrants may have no more than one support vehicle and no more than four crew members in total on the race course.
2. "Unofficial" or extra crew members and "family cheering squads" may only be present in Lone Pine and at the finish line; they may not drive on the race course except between Lone Pine and the finish line and such drive must be made without stopping. A secondary vehicle may not be used to shuttle crew members or supplies to and from the runner and support vehicle, except within Lone Pine.
3. 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. (Exceptions may be made under some circumstances for married couples or others who have a history of racing together and would like to race this event in this manner. Please inquire.)
4. Regulations for sporting events held within Death Valley National Park require that ALL support crew members (except those actively pacing their racer) wear a minimum of OSHA Class 2 (or 3) high-visibility clothing during daylight hours, and OSHA Class 3 high-visibility clothing during nighttime hours (or OSHA Class 3 high-visibility clothing 24 hours a day). These regulations may ONLY be met by wearing the special garments developed by ZZYXXZ in collaboration with BADWATER and which can be pre-ordered for pick-up in Death Valley prior to the race, OR by wearing certified OSHA Class 2 (in daytime) and Class 3 (at nighttime) vests / jackets, such as those worn by highway workers. Please note: Running-type reflective vests, such as those by Nathan Sports, do NOT meet OSHA Class 2 or Class 3 requirements.
5. Racers and Pacers may dress as they choose during daylight. At night, Racers and Pacers must wear 360 degree reflectivity (such as runner-type reflective vests by Nathan Sports) and front and rear blinky lights at night. Racers and Pacers are not required to wear the specific OSHA Class 2/3 garments that are required for all crew members, but that level of high-contrast reflectivity and visibility is highly recommended for racers and pacers, too.
6. In addition to the requisite reflective garments, all crew members, pacers, and racers must wear front and rear blinky lights whenever they are outside of a motor vehicle during nighttime.
7. Beginning immediately at the start line, racers must not run

abreast with other racers or with pacers, except when passing a slower racer, which must be done quickly. All running must be single-file. Additionally, pacers may not run in front of, even slightly, racers at any time. (Pacers may run next to their Racer briefly, when handing off supplies or spraying their Racer, but only on the left of the Racer.)

8. 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 while he or she is moving forward on the race course.

9. Any crew member running along with their racer is considered a pacer and must wear the pacer's designated bib number (provided at Racer Check-In). 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. Time penalties will be assessed for all infractions.

10. No more than two crew members, including a pacer if one is present, may be on the other side (racers' side) of the highway at any given time.

11. Crew members, other than pacers, may never cross the roadway during the entire Father Crowley climb (a 12.2-mile stretch from Time Station 3 at Panamint Springs Resort at Mile 72.7 to "Panamint Pass" at Mile 84.9), as described above. Also, each racer, or racer's pacer, is strongly encouraged to carry a walkie-talkie for communicating with his or her support crew during this 12.2-mile stretch of the race route. In addition to Badwater race staff, this will also be monitored by National Park Service staff who have the authority to disqualify racers.

12. Racers may not be accompanied by pacers or moving crew members until Mile 42 at the Stovepipe Wells time station. Exception: racers over the age of 65 may utilize a pacer from Mile 3.5 (Natural Bridge turn-off.)

13. 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. (Drones are illegal within Death Valley National Park boundaries.)

14. 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.

## Support Vehicles

1. The California Motor Vehicle Code, and all local, county, and/or federal 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 80" in width, per official manufacturer spec's. Small Cars, Minivans, and SUVs are recommended. Oversize SUVs, vans, and trucks, or other types of oversize vehicles are strongly discouraged. Motorhomes, RVs, "SportsMobiles," Sprinter Vans (and similar, such as the Dodge Ram 1500 / 2500, vehicles with extra high rooflines, and all types of Hummers are specifically not allowed. Support vehicles may not pull trailers of any kind. (The largest vehicle currently allowed at the event is the Nissan NV3500.)

3. All race vehicles must have highly visible signage on the back of the vehicle stating "CAUTION RUNNERS ON ROAD." Magnetic reusable signs may be ordered from our sign vendor, or one-time use signs will be provided - if needed - at no charge by the race organizers at Racer Check-In.

4. All support vehicles must have their racer's bib number easily and clearly visible on both sides, the front, and the left rear. Sticky racer bib numbers will be provided to ALL racers at no charge during Racer Check-In: these racer numbers must be displayed on the support vehicle.

5. Display of the racer's name is optional, but must be at least 6" (15cm) tall if displayed, with a white background and black, blue, or red letters.

6. Sponsor / Charity names and graphics may be placed on support vehicles on the left and right sides only, but NOT on the front or rear.

7. Vehicle windows may not be blocked or obstructed with any signage, paint, or the like. No racer will be allowed to start the race who has any vehicle windows blocked. If a racer support vehicle is found with blocked windows during the race, that racer will be forced to stop and wait while the vehicle's windows are unblocked and signage properly mounted.

8. Driving must be done at the speed of traffic, without 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, nor is slowing down to speak with or to a racer or other person while moving. Vehicles must "leapfrog" the runner at all times. Each "leapfrog" should generally be two miles or more in length. Racers may not be "shadowed" (driving a vehicle at the runner's speed.) Driving may never be at the speed of any racer.

9. All support vehicles must have their headlights on while driving, 24 hours a day.

10. 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, except in parking lots or exceptionally large pullouts. 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.

11. When parked, the doors on the left side of the vehicle must never be opened into the roadway, even momentarily. All exiting of the vehicle by active crew members must be from the right side of the vehicle; drivers may exit from left but only if space allows for them to do so without their door opening into the roadway. Crew members must not stand on the left side of a parked vehicle (between the road and the vehicle.)

12. Support vehicles must not park across from parked vehicles on the other side of the road (50 meters in either direction), in order to avoid bottleneaking the roadway.

13. Support vehicles may not stop during the one-mile stretch which begins at Harmony Borax Works at Mile 19.1, while runners pass through the curvy "Harmony Curves" section of Hwy 190. Each support vehicle should wait at Harmony Borax Works long enough to allow the runner to cover the next, mostly uphill mile, then drive ahead (no stopping nor slowing until Mile 20.1).

14. On the Father Crowley climb (a 12.2-mile stretch from Time Station 3 at Panamint Springs Resort at Mile 72.7 to "Panamint Pass" at Mile 84.9), support vehicles may only stop at EIGHT designated locations along the route. These are identified in the route book and with signage along the roadway. They are located 1.8, 3.4, 4.7, 5.3, 5.9, 7.95, 10.5, and 12.2 miles beyond Panamint Springs Resort. Except in a legitimate emergency situation, stopping at any other location along this stretch of roadway, even momentarily, will result in the immediate disqualification of the racer associated with the stopped crew. In addition to Badwater race staff, this will also be monitored by National Park Service staff who have the authority to disqualify racers.

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

4. 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 the event is held 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 - except on the Father Crowley climb as noted elsewhere - rather than the racer crossing to the crew / vehicle. Time Penalties or Disqualification will be enforced with a Zero Tolerance Policy towards dangerous crossing of, or behavior on, the roadway.

5. Per National Park Service regulations, racers and crew members may not wear any headset covering the ears, or any earplugs in both ears, unless it is a necessary prosthetic device that aids the hearing-impaired.

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 via motor vehicle, his/her crew must physically mark 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 racers at Racer Check-In. Racers may only leave or otherwise drive up or down the course via motor vehicle for medical attention, NOT simply to rest. This must be reported as soon as possible to Race Headquarters or the nearest time station. Racers found in a moving motor vehicle will be disqualified unless they are en route to or from medical care. 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, bib #, reason for withdrawal, time of withdrawal, and miles completed must be stated. All racers and crew who withdraw from the race are encouraged - and expected - to come to the finish line and the post-race party 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 135 race t-shirt, hat, Race 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 four crew members). All racers who officially complete the event within 48 hours will receive a finisher's t-shirt and commemorative Badwater 135 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:

- A WARNING may be issued, depending on the nature of the infraction, at the discretion of the race official (A "slash" will be marked on the racer's bib number.)
- First Penalty: One Hour ("X" will be marked on the racer's bib number.)
- Second Penalty: Disqualification

4. Time penalties are imposed by the penalized runner stopping at the final Time Station in Lone Pine to serve his/her time penalty. 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. Any racer who is required to serve a time penalty, but does not stop to do so, will be disqualified.

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

Have fun and keep smiling! Remember, you chose to be here!

# DAVID JONES, TEN-TIME FINISHER

By Chris Kostman

In 2019, we salute David Jones, 67, of Murfreesboro, TN, who has successfully completed the Badwater 135 Ultramarathon ten times between 1995 and 2018, from age 43 through 66. Additionally, David was the 1997 race champion with a time of 29:10 and is the current 60+ men's age group record holder with his 30:33:19 finish in 2012. Having won the 60+ division at Badwater Cape Fear with an 8th place overall this March, David will compete again at Badwater 135 this July, 2019. David also routinely wins the "Best Hair Award" each July.

Year	Badwater
1995	37:51:06
1997	29:10:00
1999	DNF
2006	DNF
2007	31:12:32
2008	40:16:11
2009	31:26:25
2010	DNF
2012	30:33:19
2013	36:51:56
2016	35:55:58
2017	35:15:06
2018	42:01:50

When asked "What keeps you coming back", David wrote: *"My first response would be 'I guess I am a slow learner.' Seriously, Badwater has been a part of my life and my wife Pallie's life for the last twenty-five years. My first Badwater was 1995. I was fortunate to win Badwater in 1997 due to Eric Clifton's race philosophy of going all out from the start. A philosophy I must say I admire, but a philosophy Badwater has a way of altering around Panamint. I must add Eric is a great friend and ultra runner whom I have known and admired for many years. What keeps me coming back? I guess I could fill a page with my response, but I will just share a few simple words. Death Valley is such a beautiful unforgiving venue. The friendships and bonds with the Badwater family are memories which will last our lifetimes. Badwater will take you to the edge of your physical abilities and give you a opportunity to find out what you are really made of when you have to make a decision to 'quit' or move forward. It takes me out of my comfort zone every time and as they say 'the comfort zone is a beautiful place, but nothing grows there.' It is great to see all the volunteers share your passion. The volunteers are so passionate about helping you reach your goal. I must certainly add because of you (Chris Kostman) and so many race directors such as you, we runners get to pursue our somewhat selfish passion. Having said all of this, I must say the one most important thing Badwater has given me is the opportunity to share all of these memories with Pallie, my best friend and wife of thirty-six years who as always been my Crew Chief and biggest supporter, along with all my loving Crew Members without whom none of my ten finishes would have been possible."*



# Badwater Ultramarathon 135, 1990–Present

Year	Starters	Finishers	Buckle Cut-Off	Sub 60hr	Sub 48hr	Sub 40hr	Sub 34hr	New Record: Men	New Record: Women
2018 (PM)	99	69	48 Hours	N/A	70%	39%	23%		
2017 (PM)	95	75	48 Hours	N/A	79%	52%	16%		
2016 (PM)	97	84	48 Hours	N/A	87%	55%	25%	21:56:32	25:53:07
2015 (PM)	97	77	48 Hours	N/A	81%	57%	20%		
<b>4 Year Avg</b>	<b>97</b>	<b>79</b>			<b>79%</b>	<b>51%</b>	<b>21%</b>		
2014 (AM)	97	83	48 Hours	N/A	86%	52%	23%		
2013 (AM)	96	81	48 Hours	N/A	84%	39%	23%		
2012 (AM)	96	89	48 Hours	N/A	93%	71%	34%		
2011 (AM)	94	81	48 Hours	N/A	86%	76%	20%		
2010 (AM)	80	73	48 Hours	91%	83%	51%	19%		26:16:12
<b>5 Year Avg</b>	<b>92.6</b>	<b>81.4</b>			<b>86%</b>	<b>58%</b>	<b>24%</b>		
2009 (AM)	86	75	48 Hours	87%	77%	47%	24%		
2008 (AM)	82	75	48 Hours	91%	83%	37%	10%		26:51:33
2007 (AM)	84	78	48 Hours	93%	77%	47%	18%	22:51:29	
2006 (AM)	85	67	48 Hours	79%	62%	24%	13%		
2005 (AM)	81	67	48 Hours	83%	56%	22%	7%	24:36:08	
<b>5 Year Avg</b>	<b>83.6</b>	<b>72.4</b>		<b>87%</b>	<b>71%</b>	<b>35%</b>	<b>14%</b>		
2004 (AM)	72	57	48 Hours	79%	58%	28%	8%		
2003 (AM)	73	46	48 Hours	63%	42%	14%	5%		
2002 (AM)	78	58	48 Hours	74%	47%	12%	4%		27:56:47
2001 (AM)	71	55	48 Hours	77%	46%	14%	7%		
2000 (AM)	69	49	48 Hours	71%	41%	16%	12%	25:09:05	29:48:27
<b>5 Year Avg</b>	<b>72.6</b>	<b>53</b>		<b>73%</b>	<b>47%</b>	<b>17%</b>	<b>7%</b>		
1999 (AM)	42	33	48 Hours	78%	60%	26%	12%	27:49:00	36:58:00
1998 (AM)	29	20	48 Hours	69%	41%	17%	10%	28:09:00	
1997 (AM)	27	20	48 Hours	74%	44%	26%	3%	29:10:00	37:01:00
1996 (AM)	23	14	45 Hours	61%	35%	1%	4%	33:01:00	41:13:00
1995 (PM)	24	16	45 Hours	67%	38%	13%	0%		
<b>5 Year Avg</b>	<b>29</b>	<b>20.6</b>		<b>70%</b>	<b>44%</b>	<b>17%</b>	<b>6%</b>		
1994 (PM)	25	16	45 Hours	64%	32%	1%	4%		
1993 (PM)	12	10	60 Hours	83%	50%	25%	17%		
1992 (PM)	14	13	60 Hours	92%	29%	14%	14%		
1991 (PM)	14	14	60 Hours	100%	71%	36%	14%		
1990 (PM)	21	17	70 Hours	81%	29%	29%	14%		
<b>5 Year Avg</b>	<b>17.2</b>	<b>14</b>		<b>84%</b>	<b>42%</b>	<b>21%</b>	<b>13%</b>		

# Unique Finishers' Nationality

Argentina	5
Australia	20
Austria	10
Belgium	1
Bermuda	1
Bolivia	1
Brazil	29
Bulgaria	1
Canada	28
Cayman Islands	1
Chile	1
China	2
Colombia	1
Czech Republic	2
Denmark	4
El Salvador	1
France	32
Germany	45
Greece	3
Guatemala	3
Hungary	6
India	5
Iran	3
Ireland	5
Israel	1
Italy	16
Japan	10
Jordan	2
Kazakhstan	1
Latvia	1
Luxembourg	2
Malaysia	1
Mexico	9
Netherlands	1
New Zealand	5
Philippines	4
Poland	6
Portugal	3
Romania	1
Russia	4
Serbia	2
Singapore	3
Slovenia	1
South Africa	3
South Korea	1
Spain	6
Sweden	4
Switzerland	6
United Kingdom	48
United States	502
<b>Total Non-USA</b>	<b>351</b>
<b>Total</b>	<b>853</b>

# Age Group and \*\* Overall Course Records

Age Group	Men	Time	Women	Time
10-19	Nickademus Hollon, 19, USA, 2009	33:21:29	N/A	N/A
20-29	Pete Kostelnick, 28, USA, 2016**	21:56:32	Jen Lee Segger, 28, Canada, 2008	32:31:57
30-39	Oswaldo Lopez, 39, Mexico, 2011	23:41:40	Alyson Venti (Allen), 34, USA, 2016**	25:53:07
40-49	Valmir Nunes, 43, Brazil, 2007	22:51:29	Nikki Wynd, 43, Australia, 2015	27:23:27
50-59	Charlie Engle, 50, USA, 2013	26:15:35	Irina Reutovich, 50, Russia, 2000	29:48:27
60-69	David Jones, 60, USA, 2012	30:33:19	Pamela Chapman-Markle, 62, USA, 2018	34:30:53
70-79	Arthur Webb, 70, USA, 2012	33:45:40	N/A	N/A
Youngest Ever	Nickademus Hollon, 19, USA, 2009	33:21:29	Breanna Cornell, 22, USA, 2014	44:58:21
Oldest Ever	Jack Denness, 75, UK, 2010	59:13:02	Sigrid Eichner, 64, Germany, 2005	52:45:46
Oldest Ever (Sub-48 Hrs.)	Arthur Webb, 70, USA, 2012	33:45:40	Dixie A. Madsen, 63, USA, 2000	47:04:00

## Historical Data 1987-2019

**Total Number of Entrants, including 2019: 1981**

\* 1568 Males, 413 Females (79% / 21%)

**Total Number of Unique Entrants, including 2019:**

**1011** \* 760 Males, 206 Females (78% / 22%)

**Total Unique Finishers, through 2018 (any time limit): 853** \* 659 Males, 194 Females (77% / 23%)

\* Time limits have been 70 hrs, 60 hrs, then 48 hrs

**Total Unique Finishers, through 2018 (48 hrs or less): 730** \* 563 Males, 167 Females (77% / 23%)

**Total Unique Finishers, through 2018 (36 hours or less): 242** \* 197 Males, 45 Females (81% / 19%)

**Comparison: Total Number of Mt. Everest Summits, as of 2016:**

**7,646** summits by 4,469 people

## Numbers of Official Finishes, through 2018

**1-Time Finishers: 569** (442 Males and 127 Females; 77% / 23%)

**2-Time Finishers: 152** (118 Males and 34 Females; 77% / 23%)

**3-Time Finishers: 56** (42 Males and 14 Females; 75% / 25%)

**4-Time Finishers: 26** (17 Males and 9 Females; 65% / 35%)

**5-Time Finishers: 16** (13 Males and 3 Females; 81% / 19%)

**6-Time Finishers: 6** (Kimberlie Budzik, Ruben R. Cantu, Charlie Engle, Jonathan Gunderson, Grant Maughan, Steven R. Silver)

**7-Time Finishers: 7** (Shannon Farar-Griever, Karla Kent, Monica Scholz, Mark Matayzic, Frank McKinney, Mark Olson, Anthony Portera)

**8-Time Finishers: 7** (Cheryl Zwarkowski, Ed Ettinghausen, Eberhard Frixe, Harvey Lewis, Oswaldo Lopez, Ian Parker, Keith Straw)

**9-Time Finishers: 1** (Chris Frost)

**10-Time Finishers: 3** (Lisa Smith-Batchen, David Jones, Dean Karnazes)

**11-Time Finishers: 2** (Pam Reed, Ray Sanchez)

**12-Time Finishers: 3** (Jack Denness, Dan Marinsik, Danny Westergaard)

**13-Time Finishers: 1** (Scott Weber)

**14-Time Finishers: 2** (John Radich, Arthur Webb)

**20-Time Finishers: 1** (Marshall Ulrich)

## Men Who Have Run Under 26 Hours

Name	Age	Nationality	Year	Time
Pete Kostelnick	28	USA	2016	21:56:32
Valmir Nunez	43	Brazil	2007	22:51:29
Mike Morton	40	USA	2012	22:52:55
Jorge Pacheco	40	Mexico	2008	23:20:16
Pete Kostelnick	27	USA	2015	23:27:10
Oswaldo Lopez	40	Mexico	2012	23:32:28
Marco Farinazzo	40	Brazil	2009	23:39:18
Harvey Lewis	35	USA	2016	23:40:52
Oswaldo Lopez	39	Mexico	2011	23:41:40
Akos Konya	32	Hungary	2007	23:47:47
Akos Konya	33	Hungary	2008	23:49:44
Dan Lawson	43	United Kingdom	2016	23:52:43
Mick Thwaites	42	Australia	2016	23:52:43
Harvey Lewis	38	USA	2014	23:52:55
Oswaldo Lopez	37	Mexico	2009	24:36:07
Scott Jurek	31	USA	2005	24:36:08
Carlos Sa	39	Portugal	2013	24:38:16
Grant Maughan	50	Australia	2014	24:43:08
Zach Gingerich	30	USA	2010	24:44:48
Sekiya Ryoichi	44	Japan	2011	24:49:37
Michele Graglia	34	Italy	2018	24:51:47
Grant Maughan	49	Australia	2013	24:53:57
Iino Wataru	37	Japan	2017	24:56:19
Oswaldo Lopez	38	Mexico	2010	25:05:38
Zach Gingerich	29	USA	2009	25:06:12
Anatoli Kruglikov	42	Russia	2000	25:09:05
Dusan Mravljje	47	Slovenia	2000	25:21:20
Oswaldo Lopez	41	Mexico	2013	25:27:03
Oswaldo Lopez	43	Mexico	2015	25:28:32
Jared Fetterolf	29	USA	2018	25:33:42
Scott Jurek	32	USA	2006	25:41:18
Marco Bonfiglio	39	Italy	2017	25:44:18
Charlie Engle	46	USA	2009	25:45:11
Zach Gingerich	32	USA	2012	25:49:40
David Goggins	32	USA	2007	25:49:40
Harvey Lewis	37	USA	2013	25:49:50
Akos Konya	31	Hungary	2006	25:58:42

## Women Who Have Run Under 30 Hours

Name	Age	Nationality	Year	Time
Alyson Venti	34	USA	2016	25:53:07
Jamie Donaldson	35	USA	2010	26:16:12
Jamie Donaldson	33	USA	2008	26:51:33
Jamie Donaldson	34	USA	2009	27:20:18
Nikki Wynd	43	Australia	2015	27:23:27
Pam Reed	47	USA	2009	27:42:52
Pam Reed	41	USA	2002	27:56:47
Brenda Guajardo	41	USA	2018	28:23:10
Pam Reed	43	USA	2003	28:26:52
Alyson Venti	32	USA	2014	28:37:28
Brenda Guajardo	39	USA	2016	28:40:13
Pam Smith	43	USA	2018	28:47:53
Sumie Inagaki	45	Japan	2011	28:49:27
Pam Reed	48	USA	2009	29:03:09
Nikki Wynd	44	Australia	2016	29:06:00
Monica Scholz	37	Canada	2004	29:22:29
Pam Reed	53	USA	2014	29:30:04
Jennifer Vogel	30	USA	2011	29:42:12
Nikki Wynd	42	Australia	2013	29:44:33
Irina Reutovich	50	Russia	2000	29:48:27
Iris Cooper-Imhof	52	Canada	2011	29:51:23
Sumie Inagaki	46	Japan	2012	29:53:09
Catherine Todd	43	Australia	2013	29:55:29

To study and parse data and results from all the Badwater® races, visit: [dbase.adventurecorps.com](http://dbase.adventurecorps.com).

## SAMPLE TIME SPLITS FROM ACTUAL BADWATER 135 FINISHERS

Do you want to see how you are doing compared to previous finishers of the race? Here are several actual time splits from the past few years for your reference. This data is useful before the race for planning and visualizing, but also during it, to make sure your current pace is reasonable or feasible. The splits are grouped into 34, 40, 44, and 46 hour finishing times so you have a few samples for each finishing time. Use these to help stay on track for YOUR finish!

2:55	7:22	14:55	20:34	29:06:00	32:49:00	33:57:14	Ray Sanchez	2015
2:23	6:39	12:41	17:01	29:34:00	32:46:00	34:00:10	Michele Graglia	2016
3:19	8:30	17:01	23:09	30:38:00	32:58:00	34:04:14	Jill Anderson	2015
2:36	6:40	13:40	18:57	29:01:00	32:47:00	34:10:50	Ed Ettinghausen	2016
3:31	8:19	15:38	22:11	33:54:00	38:31:00	39:59:59	Jason Romero	2015
3:17	8:21	15:22	20:42	34:56:00	38:42:00	40:14:10	Keith Straw	2015
2:46	8:08	16:58	24:04:00	34:59:00	38:50:00	40:36:11	Dale Cougot	2016
3:34	9:50	20:04	27:43:00	38:58:00	42:10:00	43:37:51	Jodi Weiss	2015
2:49	7:42	16:19	26:09:00	38:30:00	42:18:00	44:05:40	Joao Dami	2016
3:24	9:17	19:55	28:33:00	38:54:00	42:40:00	44:15:53	Derek Dowell	2016
3:32	9:22	18:40	27:48:00	38:44:00	42:52:00	44:17:16	Michelle Payne	2017
3:42	9:58	21:47	30:16:00	40:39:00	44:13:00	46:01:29	Tess Leono	2016
3:26	8:58	19:22	27:37:00	40:16:00	44:21:00	46:11:42	Eric Gelder	2015
3:53	10:41	22:33	31:57:00	42:22:00	45:12:00	46:36:43	Cheryl Zwarkowski	2016

### My Finishes

FC / 17	SPW / 42	PSR 72	Darw 90	LP 122	P Rd. 131	Whitney 135	Date

### Notes

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Will Glover, 47, of Stuart, Florida was the final men's finisher in 2018, crossing the line in 47:10:20.



The final female finisher of 2018 was Jennifer Nissen, 32, of Roanoke, Texas, broke then tape with a time 47:37:42. Shortly thereafter this amazing cancer warrior and role model received a well-deserved standing ovation during the awards party in Lone Pine.

# 2019 OFFICIAL RACE ROSTER

## 8:00PM START

Bib	First Name	Last Name	City	State	Country	Nationality	M/F	Age	B135 Finisher?
67	TaMara	Aarin	Woodland Hills	CA	USA	USA	Female	51	No
44	Telma Ghazarian	Altoon	Porter Ranch	CA	USA	Armenia	Female	44	No
57	Silvia	Amodio	Arroyo de la Miel	Malaga	Uruguay	Uruguay	Female	57	No
79	Siva	Balu	Chicago	IL	USA	India	Male	39	No
30	Jacqueline	Brown	Saint Albans Bay	VT	USA	USA	Female	57	Yes
51	Kimberlie	Budzik	Friendswood	TX	USA	USA	Female	59	Yes
45	Bonnie	Busch	Bettendorf	IA	USA	USA	Female	61	Yes
26	Michal	Cinciala	Olomouc	Olomoucky Kraj	Czech Republic	Czech Republic	Male	46	No
33	Catra	Corbett	Bishop	CA	USA	USA	Female	54	Yes
54	Timothy	Deer	Charleston	WV	USA	USA	Male	54	No
68	Ibar	Dinampo	Secaucus	NJ	USA	Philippines	Male	38	No
61	Martin	Gruebele	Champaign	IL	USA	USA	Male	55	No
11	Rhys	Jenkins	Cardiff	Wales	United Kingdom	United Kingdom	Male	31	No
49	Karla	Kent	Las Vegas	NV	USA	Czech Republic	Female	56	Yes
22	Tess	Leono	Mandaluyong City	NCR	Philippines	Philippines	Female	51	Yes
89	Luc	Maes	Ham-Sur-Heure	Hainaut	Belgium	Belgium	Male	57	No
48	Frank	McKinney	Delray Beach	FL	USA	USA	Male	56	Yes
2	Chris	Moon	Strathaven	South Lanarkshire	United Kingdom	United Kingdom	Male	56	Yes
66	Duke	Moseley	Johns Creek	GA	USA	USA	Male	50	No
74	Wendy	Murray	Southern Shores	NC	USA	USA	Female	45	No
63	Mark	Olson	Covina	CA	USA	USA	Male	72	Yes
19	Melanie	Owen	Cincinnati	OH	USA	USA	Female	49	No
77	John	Radich	Monrovia	CA	USA	USA	Male	65	Yes
29	Claus	Rasmussen	Frederiksberg		Denmark	Denmark	Male	45	No
27	Emily	Ryan	Washington	DC	USA	USA	Female	44	Yes
18	Rajesh	Vadgama	Mumbai	Maharashtra	India	India	Male	52	No
14	Estela	Vaz Rodrigues	Piracicaba	Sao Paulo	Brazil	Brazil	Female	44	No
73	Angel (Bacho)	Vega	Gilbert	AZ	USA	USA	Male	46	No
58	Ted	Williamson	Aliso Viejo	CA	USA	USA	Male	61	No
50	Cheryl	Zwarkowski	Victorville	CA	USA	USA	Female	61	Yes

## 9:30PM START

Bib	First Name	Last Name	City	State	Country	Nationality	M/F	Age	B135 Finisher?
88	Jean	Aponte	Mandeville	LA	USA	USA	Male	35	No
55	Hector	Bengolea	Vicente Lopez	Buenos Aires	Argentina	Argentina	Male	55	Yes
52	Brenda	Blinn	St. Helena	CA	USA	USA	Female	52	No
64	Corrado	Buzzolan	Santorso		Italy	Italy	Male	54	No
12	Chris	Calimano	Staten Island	NY	USA	USA	Male	37	No
10	Pamela	Chapman-Markle	San Leon	TX	USA	USA	Female	63	Yes
25	Amy	Costa	Ponte Vedra Beach	FL	USA	USA	Female	54	Yes
21	Michael	Coutu	Lipan	TX	USA	USA	Male	31	No
76	Lisa	DeVona	Pompano Beach	FL	USA	USA	Female	43	No
82	Derek	Dowell	Baton Rouge	LA	USA	USA	Male	36	Yes
16	Ed	Ettinghausen	Murrieta	CA	USA	USA	Male	56	Yes
60	Geoffrey	Foote	Chandler	AZ	USA	USA	Male	51	Yes
40	Vicente Juan	Garcia Beneito	Alcoy		Spain	Spain	Male	43	No
53	Jessica	Hardy	Dana Point	CA	USA	USA	Female	36	Yes
95	Brian	Hill	Fort Worth	TX	USA	USA	Male	45	Yes
36	Joshua	Holmes	Los Angeles	CA	USA	USA	Male	41	Yes
65	Chris	Jones	Sonoma	CA	USA	USA	Male	47	No
5	David	Jones	Murfreesboro	TN	USA	USA	Male	67	Yes
34	Richard Chas	Kabanuck	Clovis	NM	USA	USA	Male	35	Yes
8	Kerri	Kanuga	Grand Cayman	Grand Cayman	Cayman Islands	Cayman Islands	Female	49	Yes
91	Christian	Magadits	Enzersfeld	Niederösterreich	Austria	Austria	Male	48	No
92	Mitsuo	Moriya	Oyama-city	Tochigi-ken	Japan	Japan	Male	40	No
93	Luca	Morstabilini	Cremona		Italy	Italy	Male	50	No
97	Garth	Reader	Los Alamos	NM	USA	USA	Male	57	No
87	Kleber Felipe	Santos	Caxambu	MG	Brazil	Brazil	Male	39	Yes
3	Mosi	Smith	Grants Pass	OR	USA	USA	Male	37	Yes

### 9:30PM START (Cont.)

Bib	First Name	Last Name	City	State	Country	Nationality	M/F	Age	B135 Finisher?
38	Eric	Spencer	Coconut Grove	FL	USA	USA	Male	40	Yes
17	Joshua	Stevens	Estes Park	CO	USA	USA	Male	48	No
96	Jared	Struck	Wetumpka	AL	USA	USA	Male	38	Yes
62	Glenn	Sutton	Dunedin	Otago	New Zealand	New Zealand	Male	45	Yes
32	Eric	Tadt	Minneapolis	MN	USA	USA	Male	32	No
4	Michelle	West	Costa Mesa	CA	USA	USA	Female	47	Yes
84	Danny	Westergaard	Palos Verdes Estates	CA	USA	USA	Male	60	Yes

### 11:00PM START

Bib	First Name	Last Name	City	State	Country	Nationality	M/F	Age	B135 Finisher?
75	Patrycja	Bereznowska	Wieliszew	Mazowiecki	Poland	Poland	Female	43	No
6	Ben	Blessing	Nampa	ID	USA	USA	Male	35	Yes
28	Matthew	Collins	Philadelphia	PA	USA	USA	Male	28	No
46	Vitor Bruno	Fernandes Rodrigues	Oporto	Portugal	Portugal	Portugal	Male	35	No
69	Flavio	Fernandes Vieira	Brasilia	Distrito Federal	Brazil	Brazil	Male	50	No
39	Zach	Gingerich	Newberg	OR	USA	USA	Male	39	Yes
24	Jonathan	Gunderson	San Bruno	CA	USA	USA	Male	41	Yes
100	Timothy	Henderson	Sayville	NY	USA	USA	Male	49	No
99	Walker	Higgins	Port Allen	LA	USA	USA	Male	37	No
23	Eric	Hunziker	Cincinnati	OH	USA	USA	Male	50	Yes
59	Yoshihiko	Ishikawa	Naruto-city	Tokushima	Japan	Japan	Male	31	No
70	Damian	Kaczmarek	Poznan	Wielkopolska	Poland	Poland	Male	39	No
72	Steven	Kent	North Bend	WA	USA	USA	Male	51	No
42	Tetsuo	Kiso	Moriya	Ibaraki	Japan	Japan	Male	51	Yes
90	John	Kohler	Olathe	KS	USA	USA	Male	39	No
1	Pete	Kostelnick	Brunswick	OH	USA	USA	Male	31	Yes
20	Nick	LaBoffe	Cincinnati	Ohio	USA	USA	Male	38	Yes
7	Nancy	Levene	New York	NY	USA	USA	Female	51	No
35	Harvey	Lewis	Cincinnati	OH	USA	USA	Male	43	Yes
71	Caryn	Lubetsky	Miami Shores	FL	USA	USA	Female	48	No
56	Mark	Matyazic	Irvine	CA	USA	USA	Male	54	Yes
9	Grant	Maughan	Dudley	NSW	Australia	Australia	Male	55	Yes
37	Dan	McHugh	Snowmass Village	CO	USA	USA	Male	48	Yes
43	Hiroyuki	Nishimura	Kamagaya	Chiba	Japan	Japan	Male	49	Yes
94	Krystian	Ogly	Sobotka	Dolnoslaskie	Poland	Poland	Male	41	No
98	Chris	Rice	Suffern	NY	USA	USA	Male	45	Yes
41	Ray	Sanchez	Sacramento	CA.	USA	USA	Male	52	Yes
83	Mike	Shaddow	Ridgewood	NJ	USA	USA	Male	43	No
81	Gina	Slaby	Callaway	MD	USA	USA	Female	38	No
80	Steve	Slaby	Callaway	MD	USA	USA	Male	38	No
78	Chris	Solarz	New York	NY	USA	USA	Male	40	No
31	Uli	Stuwe	Ventura	CA	USA	Germany	Male	45	Yes
47	Suzi	Swinehart	Fort Wayne	IN	USA	USA	Female	47	No
85	Annie	Weiss	Milwaukee	WI	USA	USA	Female	34	No
86	Lee	Whitaker	Fort Mill	SC	USA	USA	Male	45	No

2018



**BBFB ROSTER QUICK REFERENCE**

<b>Bib</b>	<b>Wave</b>	<b>First</b>	<b>Last</b>
1	2300	Pete	Kostelnick
2	2000	Chris	Moon
3	2130	Mosi	Smith
4	2130	Michelle	West
5	2130	David	Jones
6	2300	Ben	Blessing
8	2130	Kerri	Kanuga
7	2300	Nancy	Levene
9	2300	Grant	Maughan
10	2130	Pamela	Chapman-Markle
11	2000	Rhys	Jenkins
12	2130	Chris	Calimano
14	2000	Estela	Vaz Rodrigues
16	2130	Ed	Ettinghausen
17	2130	Joshua	Stevens
18	2000	Rajesh	Vadgama
19	2000	Melanie	Owen
20	2300	Nick	LaBoffe
21	2130	Michael	Coutu
22	2000	Tess	Leono
23	2300	Eric	Hunziker
24	2300	Jonathan	Gunderson
25	2130	Amy	Costa
26	2000	Michal	Cinciala
27	2000	Emily	Ryan
28	2300	Matthew	Collins
29	2000	Claus	Rasmussen
30	2000	Jacqueline	Brown
31	2300	Uli	Stuwe
32	2130	Eric	Tadt
33	2000	Catra	Corbett
34	2130	Richard Chas	Kabanuck
35	2300	Harvey	Lewis
36	2130	Joshua	Holmes
37	2300	Dan	McHugh
38	2130	Eric	Spencer
39	2300	Zach	Gingerich
40	2130	Vicente Juan	Garcia Beneito
41	2300	Ray	Sanchez
42	2300	Tetsuo	Kiso
43	2300	Hiroyuki	Nishimura
44	2000	Telma Ghazarian	Altoon
45	2000	Bonnie	Busch
46	2300	Vitor Bruno	Fernandes Rodrigues
47	2300	Suzi	Swinehart
48	2000	Frank	McKinney
49	2000	Karla	Kent
50	2000	Cheryl	Zwarkowski
51	2000	Kimberlie	Budzik

<b>Bib</b>	<b>Wave</b>	<b>First</b>	<b>Last</b>
52	2130	Brenda	Blinn
53	2130	Jessica	Hardy
54	2000	Timothy	Deer
55	2130	Hector	Bengolea
56	2300	Mark	Matyazic
57	2000	Silvia	Amodio
58	2000	Ted	Williamson
59	2300	Yoshihiko	Ishikawa
60	2130	Geoffrey	Foote
61	2000	Martin	Gruebele
62	2130	Glenn	Sutton
63	2000	Mark	Olson
64	2130	Corrado	Buzzolan
65	2130	Chris	Jones
66	2000	Duke	Moseley
67	2000	TaMara	Aarin
68	2000	Ibar	Dinampo
69	2300	Flavio	Fernandes Vieira
70	2300	Damian	Kaczmarek
71	2300	Caryn	Lubetsky
72	2300	Steven	Kent
73	2000	Angel (Bacho)	Vega
74	2000	Wendy	Murray
75	2300	Patrycja	Bereznowska
76	2130	Lisa	DeVona
77	2000	John	Radich
78	2300	Chris	Solarz
79	2000	Siva	Balu
80	2300	Steve	Slaby
81	2300	Gina	Slaby
82	2130	Derek	Dowell
83	2300	Mike	Shaddow
84	2130	Danny	Westergaard
85	2300	Annie	Weiss
86	2300	Lee	Whitaker
87	2130	Kleber Felipe	Santos
88	2130	Jean	Aponte
89	2000	Luc	Maes
90	2300	John	Kohler
91	2130	Christian	Magadits
92	2130	Mitsuo	Moriya
93	2130	Luca	Morstabilini
94	2300	Krystian	Ogly
95	2130	Brian	Hill
96	2130	Jared	Struck
97	2130	Garth	Reader
98	2300	Chris	Rice
99	2300	Walker	Higgins
100	2300	Timothy	Henderson



The **BADWATER® ULTRA CUP** comprises *Badwater Cape Fear* in March, *Badwater Salton Sea* in late April, and *Badwater 135* in July. Those runners who complete all three full-distance events in the same calendar year will be featured on the Badwater website and their virtues will be extolled throughout the Internet and in future editions of **BADWATER Magazine**.

## 2019 BADWATER ULTRA CUP CURRENT STANDINGS



**Pamela Chapman-Markle**  
Combined Time: 30:16:30



**Kerri Kanuga**  
Combined Time: 30:54:30



**Telma Ghazarian Altoon**  
Combined Time: 33:48:00



**Lisa DeVona**  
Combined Time: 34:28:30



**Ta'Mara Aarin**  
Combined Time: 38:48:18



**Wendy Murray**  
Combined Time: 38:54:10



**Dan McHugh**  
Combined Time: 23:06:00



**Joshua Stevens**  
Combined Time: 23:48:42



**Jean Aponte**  
Combined Time: 29:12:45



**Chris Calimano**  
Combined Time: 31:43:15



**Ted Williamson**  
Combined Time: 33:36:45



**Michael Coutu**  
Combined Time: 33:58:35



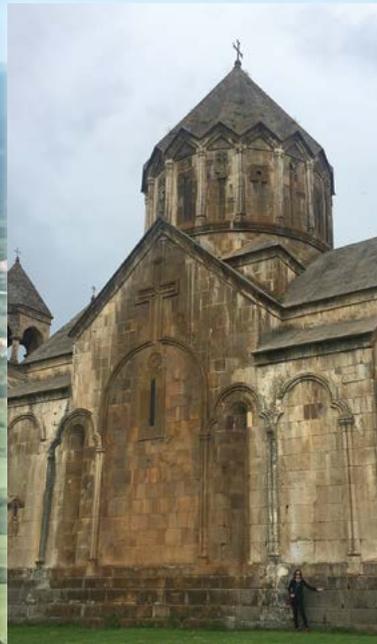
**Siva Balu**  
Combined Time: 35:36:50



**Ibar Dinampo**  
Combined Time: 37:35:25

# Explore Artsakh!

*The Mountainous Republic of Artsakh is a democratic Christian Armenian nation located just east of Armenia itself. It's a gorgeous place with trails and pathways dating back literally thousands of years traversing pristine lands and passing through towns and villages, ancient sites, natural wonders, Christian churches dating as far back as the 4th Century AD, the historic city of Shushi, the gorgeous capital city of Stepanakert, and so much more. Artsakh is just a short flight from Europe and well worth the trip from all the corners of the globe!*



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And [www.Badwater.AM](http://www.Badwater.AM)