

# MISSION: SAVE A STAR

BY CHRISTINE KENYON



I remember it as clear as day, except it was night — the middle of the night, in San Isabel National Forest, Colorado, under crystal clear skies, with a photography workshop led by my Dad.

**A**S A CHILD GROWING UP IN THE WASHINGTON D.C. Metropolitan Area, any mention of the Milky Way galaxy would conjure up science classes, textbooks, or documentaries with baritone voiceovers. But that night, under the stars, on a mountain in Colorado, this 14 year old was deeply moved by the majesty of that ribbon of shimmering stars stretching across the heavens. Overcome with awe, I exclaimed, "Wow! Now I know why it's called the Milky Way!"

So when it was revealed, through a study in 2016, that light pollution now hides the Milky Way from 80% of the developed world, it made a profound impact on me — both as a lover of the outdoors, and as someone who had just begun to shoot nightscape photography with enthusiasm here in the glorious American west.

2016 was also a pivotal year for me. I closed down my PR shop, and opted instead to return full-time to my roots in photography. My late father, Lowell Anson Kenyon, who

was the Chief of the Office of Photography for the Smithsonian Institution, got a camera into my hands by my second Christmas, and I was comfortable shooting, developing and printing black and white images in the darkroom by the ripe old age of eight.

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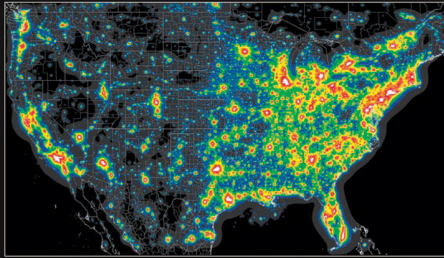
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By age 14, I was placing in international adult print competitions (there were no youth divisions). I even landed a feature story in an international photography magazine, after the editor contacted my Dad wanting to interview the “child prodigy.” I remember rolling my eyes when my Dad explained what “prodigy” meant — I guess I didn’t take myself that seriously as an artist, I simply saw myself as a kid who loved nature, and wanted to bring home my adventures on film.

Of course, film cameras cannot record images of the night sky with near the same dynamic range, clarity and color values as the digital cameras of today. So the quality of my first attempt at digital nightscape photography, in 2016, with my Nikon D810, was nothing short of miraculous.

That first image, titled “Stargazer,” a picture of my black Lab Tuffy in front of Metate Arch in Utah (cover photo), took nine months from the original pencil sketches, to the final image. “Stargazer” has garnered over a half million likes across Instagram, and has been widely published.

Absolutely hooked after my first nocturnal shooting experience, I dove deeper into this relatively new niche,



Light Pollution in the U.S.

which got its start about 10 years prior, when in 2006, articles began to appear advising photographers on which digital cameras and lenses worked best for the genre. Technology had finally swung open the door to capture the grandeur of our galaxy with cameras that the average person could afford.

So off I would go, with two Labrador Retrievers in a Toyota 4Runner, blazing trails across Utah and the west, to hunt for landscapes and nightscapes, in what I consider the most beautiful region of our nation.

It didn’t take long for me to notice that my images would occasionally reveal the undesirable side-effects of light



Cities are “Upgrading” their lights

pollution, on what would otherwise have been an epic composition. I think one of the most profound examples of picture-wrecking light pollution is the glowing orb in the direction of Las Vegas, when shooting from certain parts of Death Valley or Joshua Tree National Parks. It almost looks like the aftermath of a nuclear detonation.

So with observation, comes thoughtful reflection, and in my case, just after that comes an exercise in problem solving, or at least an attempt to find a meaningful way to contribute to the solution.

My research into the effects of light pollution would soon prove valuable, when in January 2017, I noticed that

several street lights in our beautifully dark, mountain community, had been “upgraded” to a new city-standard light. The new light was blue-white, decidedly harsh, excessive, and in our thick winter fog would prove downright dangerous. After all, fog lights on vehicles are amber for a reason.

Over the next two years, I worked to reclaim the dark skies within our community. Lobbying and convincing our local district board was the first step, and after that initial victory, it was onto the Draper City Council, which approved the resolution that ultimately ceded control of our street lights to the citizen board of our special service district.

It was during this process that I met Ted Maestas, with Mountain States Lighting, who would later join the board of my Save a Star Foundation. Ted had been evangelizing for dark-sky compliant lighting for years. He and I worked through the process, and created our new LED “district (lighting) standard” which now produces 60% less light than the city standard, yet is brighter than the old sodium-vapor lamps. The lights are a warm 2700K, with downlighting, and dimmers. They look amazing, and with the new LED directional patterns, the light throws exactly where we want it, not spilling onto private property.

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“Astro Dune” - Death Valley National Park, California



“Uplifted” - High Uintas, Utah



“Far Out” - Yellowstone National Park, Wyoming



“Mining for Stars” - Colorado

So in the meantime, as a photographer, I began to appear on the radar of company's such as Nikon, and other leading photo industry brands, and there were requests for me to speak at conferences, and write articles on nightscape and astrophotography.

This new found exposure and subsequent opportunities, inspired me to consider creating an organization that would leverage photo industry manufacturers, harness the creative community of influencers, and bring together a big tent of strategic partners across industries, all in an effort to achieve a definable mission: Bring about a measurable reduction in light pollution in the U.S. west, by not only educating, but energizing the average citizen to care about, and lend their voice to meaningful change.

It was out of these considerations that my nonprofit Save a Star Foundation (SAS) was born. An organization dedicated to preserving and reclaiming dark skies in the western U.S. So with much deliberation, the past two years has taken me to this place, and now is the time to set upon the path forward, with all who will join us.

Of course media exposure, such as this opportunity to share with you, and the October 15 front page story in

the *Salt Lake Tribune*, introducing Save a Star Foundation to the state of Utah, has jump started our mission.

As a result, relationships with major brands have already begun, and plans to collaborate with like-minded dark-sky advocates are well underway. The energy and enthusiasm is palpable, and it will need to be. We are on pace to continue losing over 2% of the worlds dark skies to light pollution each year.

While much of the loss comes from developing nations, there is a disturbing and unintended consequence in industrialized countries, including the U.S., from the rapid changeover to LED lighting, from the prevailing sodium-vapor lamps.

The big LED conversion push in cities across the U.S. began in earnest with The American Recovery and Reinvestment Act of 2009, where federal government stimulus dollars incentivized LED upgrades, with the promise of energy savings, and a reduction in the use of fossil fuels to generate electricity.

In many cases, the desired and promised results were not realized. Energy consumption did not fall as predicted, since municipalities, and businesses alike, plowed their energy savings back into additional lights. And as many of

us can attest, much of the new LED lighting is excessively bright, emits a harsh blue-white light, with fixtures that radiate or uplight in ways that contribute to light pollution, and do little to maximize the efficiency of the lighting pattern or output in the intended area.

SAS Board Member and lighting industry expert Ted Maestas advises that, "Municipalities that have already switched over to LED, and now realize substantial uplighting and glare, can minimize these adverse effects with inexpensive dimmers per fixture. Those that currently have HID products and limited budgets can minimize uplighting with cost efficient upgrades to existing fixtures that not only save energy dollars, but create a better quality of illumination."

SAS advocates for "Smart Lighting": Appropriate Lumens, color temperature (based on the Kelvin scale), and downlighting, all of which should meet the needs, but avoid the excesses. We like to say that, "Smart lighting is safe lighting."

In an American Medical Association (AMA), press release dated, June 14, 2016, the AMA stated, "Despite the energy efficiency benefits, some LED lights are harmful when used as street lighting. High-intensity LED lighting designs emit a large amount of blue light that appears white to the naked eye and create worse nighttime glare than conventional lighting. Discomfort and disability from intense, blue-rich LED lighting can decrease visual acuity and safety, resulting in concerns and creating a road hazard. It is estimated that white LED lamps have five times greater impact on circadian sleep rhythms than conventional street lamps. Recent large surveys found that brighter residential nighttime lighting is associated with reduced sleep times, dissatisfaction with sleep quality, excessive sleepiness, impaired daytime functioning and obesity. The detrimental effects of high-intensity LED lighting are not limited to humans. . . . poorly designed LED lighting disorients some bird, insect, turtle and fish species . . ."

In July of 2017, Apple Computer recognized the "blue light" emissions from their technology, and its impact on health. Apple states on their website, "Studies have shown that exposure to bright blue light in the evening can affect your circadian rhythms and make it harder to fall asleep. . ."

Light pollution affects each and every one of us, especially if we live in metropolitan areas. And we all know the offending sources: illegally modified HID headlights from an oncoming car, or the trespassing light from a neighbors flood light that shines into our bedroom window.

And we also know the light that is safe, inviting, utilitarian or elegant. SAS advocates for "smart lighting" that best

addresses form and function — appropriate lighting for specific uses or conditions.

A one-size-fits-all is generally not the right plan, whether in your home or in your town. Yet many municipalities are either ill informed or tone deaf to the many cost effective options that can make or break a "smart lighting" plan. As a result, complaints against LED conversions are high. The public in many cases does not like what it sees.

On a positive note, light pollution is one of the least politically charged environmental issues we face. Most of us experience it, we generally agree that it's undesirable, and most of us want to see the problem solved. With the independence, grit and determination of the western mindset, I believe we can make great strides. I see Utah leading the way, and see a role for SAS in supporting that effort.

The exciting piece is that light pollution is an issue that is not only highly relatable, but it's largely winnable, and it doesn't have to carry a large price tag to implement a winning strategy. Whether it's getting better educated on the issue, engineering a better plan from the start, or coming back to retrofit an existing design, we can as individuals, as governments, and as commercial enterprises take the modest steps necessary to preserve and reclaim our dark skies. ■



\*Spinner\* — Death Valley National Park, California



Right Side Up\* — Grand Staircase-Escalante National Monument, Utah



CHRISTINE KENYON IS AN AWARDING WINNING OVERLAND-ADVENTURE AND NIGHTSCAPE PHOTOGRAPHER BASED IN UTAH. SHE WAS SELECTED AS ONE OF 100 "RISING STARS" IN PHOTOGRAPHY BY NIKON, AND WAS NAMED BY BUSINESS INSIDER AS ONE OF "20 OF THE BEST UP-AND-COMING PHOTOGRAPHERS ACROSS THE WORLD YOU CAN FOLLOW ON INSTAGRAM." CHRISTINE IS A SPEAKER, WRITER AND EDUCATOR, AND HAS SHOWN IN GALLERIES AROUND THE U.S. SHE HAS MOST RECENTLY WRITTEN FOR REALLY RIGHT STUFF MAGAZINE, AND WAS FEATURED AS NIKON'S SEPTEMBER PHOTOGRAPHER OF THE MONTH FOR THEIR FACEBOOK PAGE. CHRISTINE MOST OFTEN PRESENTS ON THE SUBJECT OF NIGHTSCAPE PHOTOGRAPHY AT CONFERENCES, AND LEADS NIGHTSCAPE AND LANDSCAPE WORKSHOPS IN THE U.S. WEST. HER NONPROFIT SAVE A STAR FOUNDATION IS ACTIVELY WORKING TO PRESERVE AND RECLAIM DARK SKIES IN THE WESTERN U.S. THROUGH STRATEGIC PARTNERSHIPS AND PROGRAMS. FIND CHRISTINE ONLINE. WEB: [HTTPS://WWW.CHRISTINEKENYON.COM](https://www.christinekenyon.com) INSTAGRAM: [HTTPS://WWW.INSTAGRAM.COM/CHRISTINEKENYONPHOTO](https://www.instagram.com/christinekenyonphoto) FACEBOOK: [HTTPS://WWW.FACEBOOK.COM/CHRISTINEKENYONPHOTO](https://www.facebook.com/christinekenyonphoto) TWITTER: [HTTPS://WWW.TWITTER.COM/CKKENYONPHOTO](https://www.twitter.com/ckkenyonphoto)

**Save a Star**  **FOUNDATION** Please join us today at: [www.saveastar.net](http://www.saveastar.net) [joinus@saveastar.net](mailto:joinus@saveastar.net) We can win this with you!

### HOW YOU CAN HELP

- Get informed — share with your neighbors
- Avoid light trespassing
- If you convert your lights, consider warm, lower output LED lights for your property
- Stay engaged on your local lighting ordinances
- Support the efforts of Save a Star Foundation — it matters