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**A BUMPY ROAD TO
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**ROCKIN' THE RUBICON
WITH A SKYCRANE**

PART 2



ROCKIN' THE RUBICON WITH A SKYCRANE

STORY BY JASON JORGENSEN

PART TWO



In a remote section of the Sierra Nevada Mountains in Northern California, volunteers, county officials and construction crews joined forces with Siller Helicopters to conduct a major maintenance project on one of the most famous off-road routes in the world, the Rubicon Trail. Jason Jorgensen visited the gravel yard which served as the base of operations and landing zone. Part 2 continues the story.

The experience is way different at ground level

According to Siller's Project Manager Eric Daeumler who was also one of the company personnel out on the trail spotting the set locations for the Crane, "Elevation from the load to the ground is extremely important to the pilots. It's very difficult to judge that from nearly 200 ft in the air, so we're constantly relaying the changes in elevation to the pilots as they descend to the ground with the load. It is also important to make sure that the load is placed exactly where the customer needs it on the trail." All of this information is relayed via radio as well, in addition to any trail markers or other visual cues the crews have placed on the ground for the pilots.

For the crews on the ground, every load that is placed is a visceral and heart-pounding event as the spotter and pilot work together to get the rock bucket into the correct set position. The deafening noise of the Skycrane directly overhead is eclipsed only by experiencing the intensity of the rotor wash, which not only kicks up vast amounts of dust, dirt and even pebbles; but is also vigorously whipping around the tall pine trees that line many parts of the trail. Everyone at



the set site needs to have their head on a swivel, especially in an environment like Rubicon. Keeping an eye on the helicopter's load is priority number one, watching for falling branches, toppling dead trees and blowing debris is priority number two.

Like a flying dump truck

In the cockpit of the S-64E, the pilot has two release buttons on the collective to control the lower hook, one for the front of the rock bucket and the other for the back of the bucket. Once the spotter relays that the load is on the ground and set at the proper location, the pilot releases the two front cables of the bucket. This allows him to pull up, thus spilling the rock out of the front of the bucket. After a few drops a pilot can learn how to spread the rock by leaning or pulling the bucket in certain directions as he pulls up - similar to how a dump truck would spread a load by moving while dumping. (This technique greatly helps the ground crew volunteers because the rocks have to be moved and placed by hand if they didn't spill out of the bucket in the right spot to begin with.)



The rear cables are retained in the lower hook and the empty bucket is flown back to the rock staging where it is then set on the ground and completely released to be refilled. The 170-pound lower hook is too heavy for one man to pick up or handle by himself so three crew members were enlisted for this task, one to hold the hook while the other two inserted the cables attached to another rock bucket, which is already filled and waiting. According to Pilot Don Anderson “While in the rock-pit, flying the double hook and keeping it at chest height for the loader to easily hook up the cables is the most difficult and stressful part of the entire process. It is of the utmost importance to be able to safely control the hook so the loader can safely hook up the bucket.”

Longline flying in a Crane

Anderson, typically spends most of his time flying the S-64E as a Helitanker Pilot on wildfires in California and other western states. For him, flying the Skycrane on the Rubicon Trail rock lift project is one of the more challenging





and gratifying jobs he's flown, remarking that it provides a nice opportunity to practice those longline skills that he doesn't have the chance to fly as often as he once did. Anderson recalls that someone once told him. "Flying a longline is like welding, you've gotta do a lot of it to be any good at it." adding that, (for him) "Gone are those long days of production flying when we were 'dialed in.' But, those old sayings I learned long ago like 'Relax son,' and 'Slow down to go fast' came right back to me."

According to the pilots, flying vertical reference longline for up to eight hours in a day can also be very fatiguing. One needs to be well rested, relaxed and comfortable in the left seat. Many S-64 pilots will lean into a 'sling,' a strap that hooks behind the seat to allow the pilot to lay into it to help prevent straining his back or neck for long durations. Leaning out all day like this while flying a longline is demanding in the best of circumstances but can also quickly become frustrating when the wind comes up or is switching directions, as it often did in the mountainous region of the Rubicon. In Anderson's experience, the Crane is probably the most difficult helicopter to fly with a longline. Stating that this is largely due to the aircraft's rolling tendency vs. hook relation to the pilot's seat,



elaborating that, “one needs to ‘stay off the pedals’ so as not to induce a ‘wowee’ in the longline.”

The sheer physicality of longlining in the Skycrane was not the only challenge experienced by the crews either. While the lift job on the Rubicon was not the most complex form of construction flying that Siller’s crews do, it had its own unique logistical challenges. Radio communications from the trail crews back to the rock loaders at the pit also presented issues as well. Normal FM Radio was ineffective in the Rubicon due to distance and terrain obstructions. To counter this, volunteers Tim Green, Mike Elrod and Simon Huber, all owners of off-road vehicles and regulars on the Rubicon, provided comms assistance by relaying communications between the rock-pit and the trail using their own HAM Radios over the region’s repeater network. These volunteers proved invaluable to the entire project not only for communication but also by providing a vast degree of local knowledge of the trail and experience in reading the local weather patterns.

The weather also decided to provide its own challenges in the form of ever changing winds, ahead of an incoming front. At density altitudes of greater than 8000 feet, the High





Sierras experience frequent moderate to high winds and the mountainous area is notorious for having weather that can change rapidly from mild sunny days to low clouds or rain. Even in the warm summer months, freezing temps and snow can pretty easily happen in the Sierras. Given the forces at hand, all involved in the Rubicon project had to pay close attention to challenges presented by the changing weather conditions as the cold front drew closer.

Rinse and Repeat

While the Crane delivered rocks to the trail and the trail-crews set the rocks in their needed locations; back at the rock-pit, the rest of the ground crews were also constantly at work. There was a smooth, professional orchestration between the crews from Doug Veerkamp Engineering gathering and sorting rocks into piles to be loaded, loading the buckets and keeping the dust to a minimum at the site with their water trucks and the Department of Transportation personnel running the hook. Over in the LZ, the helicopter ground crew were also regularly receiving the Skycrane and 500D for hot fueling throughout the day between lift cycles and also performed any needed rigging changes for when items other than the rock bucket needed to be flown.



Having completed more than was originally expected on the first day, the day came to a close at the nearby Ice House Resort. The resort's owners graciously provided meals for all of the crews and accommodations for the pilots and county personnel, during the project. "The owners of the resort really went well above and beyond..." States Daeumler, "opening up five rooms and providing meals to the crew and lodging for the pilots at a time when most hotels and motels are not open due to the pandemic was greatly appreciated. The rest of us chose to stay close to the aircraft in travel trailers. This was the first year we have done this and it all worked out great."

Day Two - Rocking out at Cadillac

The next morning began before the sun rose with a predawn, preflight of the Skycrane by its ground crews preparing the helicopter for the long day of flying ahead of it. Shortly after the S-64E was prepped, a quick safety and planning meeting followed. Not long after sunup, Daggy fired up the 500 and started taking the trail crews out to their

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respective work locations while Anderson and Livingston began to get the rotors turning on the big Skycrane. Much like the day before, this day would prove to be quite similar to the rinse and repeat rock-flying cycles of the first day with the addition of an extra volunteer crew, which had spent more than four hours on the trail already, four-wheeling in from the Lake Tahoe side.

This additional volunteer crew arrived early in the morning at Rubicon Springs, a location about halfway through the trail, which is the typical overnight camping spot for people who are crossing the Rubicon. Without seeing the terrain of the Rubicon Trail in person it is hard to imagine that a location which is only about 8 miles from the trailhead, takes almost an entire day to get to and that the entire trail takes two days to drive through. But, when the difficulty of negotiating the trail means that the average speed of vehicles driving on it is about 1.2 miles per hour - the math makes it clear.

The Rubicon Trail Foundation donated the necessary matching funds for a grant which allowed for some of the work to be done on the Placer County side of the trail, and these additional volunteers had just arrived to assist with one of the single most rock and labor intensive locations of the entire project, - Cadillac Hill. The Jeepers' Jamboree

donated the labor needed to install a gabion on Cadillac, which will not only help to control some of the extensive erosion encountered there, but will also make the trail significantly safer in that location. More volunteers were also on hand at the Springs to cook for the crews working on the Cadillac portion of the project. All of those volunteers stayed out on the trail overnight in order to continue working early the next morning, getting as much done as possible prior to the storm's arrival.

Cut short due to weather

As the morning progressed, the pilots and ground crews out on the trail settled into an efficiently synchronized cycle of calling in rock size requests, getting one bucket filled while the other bucket was being flown out, then hiking or being flown to the next work site, as work in each area was completed. During the course of the day, the project's tempo also increased. Crews on the ground and in the air got as much of the work done as they could before they ran out of daylight. And, after a restful night, everyone started off the third morning just as early, working right up until the storm forced the aircraft to cease operations partway through the day.

Given this rhythm and the distances flown by Siller's Skycrane; during the 14 hours of flying completed on the project, the S-64E was able to haul 55 loads, totaling nearly 515,000 pounds of rock distributed among 13 separate locations before the late-spring 'winter storm' ended the project early on day three. Additionally, during those three days of flying, the helicopter also flew out a prefab building to Rubicon Springs which will be used for public safety. A Mini-Excavator operated by volunteer Bob Sweeney was also flown out by the big Crane to work on water bars and set the final placement of BFR's at a couple of different sites as well.

According to Pilot Anderson, the success of any job like this is mainly due to the ground crews that truly make it all happen. "They are the ones that make it look easy. Besides, us pilots have the easy job, we are along for the ride... and what a beautiful ride it was." As Siller's Project

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Lead on the ground, a large part of Daeumler's job was simply that - making it look easy. There are a multitude of different moving parts during an operation like Rubicon, according to Daeumler, but working with a group of adaptive professionals and volunteers helped the operation go very smoothly, which made his job a lot easier. Stating, "I'm fortunate to have a job I really enjoy, I get to see and do some pretty amazing things most people never get to see. I love the crew aspect of the job, the camaraderie. The people we work for and with have made working the Rubicon one of my favorite jobs that we do."

It's the people that make the Rubicon what it is

While trail is indeed an important, and historic, recreation resource, in Vickie Sanders' opinion, it is really the people that make the Rubicon what it is. "The user community is absolutely amazing." The dedication exhibited by the trail's user community is not only reflected by the numerous volunteers which made this project possible, but also by the hundreds of volunteers from dozens of off-road and four-



wheel drive clubs and organizations around the region. These dedicated enthusiasts donate their time, money and labor to dozens of additional, organized, trail-work projects that take place every year to assist in maintaining the Rubicon Trail.

Gary Lefler, President of the Lake Tahoe Hi-Lo's, a 4-Wheel Drive club based in nearby South Lake Tahoe, CA, recently drove his Jeep into Rubicon Springs along with several of his fellow club members to help conduct another volunteer maintenance project. Along the way, the Hi-Lo's crossed over the areas of Cadillac Hill that had received the extensive work that was only made possible by using the Skycrane. Lefler stated that, "Even though they had to stop the project early, the amount of work accomplished by the helicopter and volunteers out at Cadillac was really impressive to see. It's still a challenging spot, but the new gabion will really help control the erosion there and make that portion of the trail safer." Many, if not most, of the trail's user base appreciates the vast amounts of effort put forth into maintaining the Rubicon. There are others though, that believe extensive projects like flying rocks in by helicopter, make the trail too easy and therefore, should not be done at all.

"The trail has a lot of politics. People are passionate about their pastimes..." Sanders explains, "There are issues and opinions everywhere. Some want the trail difficult, others want it easy, some want more regulations, others want the government gone from the trail entirely. We overcome all of that by simply staying the course - doing what's right for the Rubicon Trail to keep it open well into the future by educating users, being transparent and always talking to and engaging the Rubicon's amazing community of users." Despite the weather bringing an early end to the rock-lift project, Sanders feels that what was completed was highly successful, and she intends to 'stay the course' and finish the rest of this project in the fall, using the remaining flight time on the Skycrane's contract. **HO**



Jason Jorgensen has been a professional photographer for nearly 20 years. Happiest whilst in a helicopter with camera inhand, this US Navy veteran has combined his love of aviation and photography with his keen writing ability. Jason is on Instagram and Twitter @AirToArtPhoto, and can be reached at jason@heliopsmag.com