

Edge of the Cloud: Using Technology to Monitor Gas Line Construction Compliance



"We pride ourselves and our reputation on scientific integrity and well-reasoned analysis."

Caskey Biological Consulting, LLC (CBC) conducts studies for pipelines, oil and gas exploration, wind farms, utility lines, highways, and other project types throughout the United States.

"The biggest value in adopting Wildnote is easily the amount of time I have saved. It has essentially given me an entire day per week to focus on other tasks within our business."

Introduction

NEPA and CEQA regulations have proven themselves to be invaluable guardians of wildlife and habitat. While necessary, compliance with those regulations can also be complicated, time consuming and costly for large infrastructure projects. Consultants who save clients time and money through increased efficiency are clear winners. This study looks at a pipeline project in the Mojave Desert, where up to fifty biologists monitor hundreds of miles of construction through threatened species habitat.

Background

People need power. Whether it's gas, electricity, oil, or water, it travels long distances to get from the source to the user. Careful planning, pre-construction assessments, and monitoring during and after construction all work to minimize negative impacts and protect sensitive habitats and species. Caskey Biological specializes in providing companies "with comprehensive fieldwork and reports that will meet regulatory requirements and exceed your expectations." For owners, Lindsey and Jason Caskey that means delivering accurate data while staying on time and on budget.

Protecting Wildlife

Desert tortoises have been listed as a threatened species since 1990. For decades, loss of habitat and disease have reduced populations. They live 60-80 years and reach maturity at about 14-20 years old. These tortoises live most of their lives burrowed into the ground in desert valley elevations between about 1,000 and 4,000 feet. They come out to breed and feed during the late winter and stay active through spring. A summer storm might bring them back out for refreshment. While the adults are well protected by their anatomy, eggs and hatchlings are extremely vulnerable.



Gopherus agassizii hatchling

Nearly 98% of desert tortoises don't ever reach reproductive age. Human activity can collapse burrows and crush tortoises and eggs. When a utility needs to lay infrastructure through this habitat, stringent assessment, monitoring and compliance is required.

The Problem

For business owner and field biologist Jason Caskey, data management tasks often seemed to move as slow as the desert tortoises this particular data protects. Day after day, he tediously cut and pasted survey results and photos from the field into a single document for his client's weekly report. With 45-50 biologists in the field, each using whatever version of Microsoft Word they had installed, this was a repetitive, frustrating, time-sucking part of the job.

"With all the versions of Word, often times formatting would be off. I was spending a lot of time every day reviewing, editing, and compiling reports. I had been thinking for a while that there had to be a better, more efficient way to go about it."

He began researching different digital technology tools to make his work more efficient.

The Solution

Jason said he signed up for Wildnote’s 30-day free trial after finding it on LinkedIn. “I initially thought that maybe it wouldn’t work for us, and I let it go when the trial was over.” A follow-up call from technical-support expert Gabi Ojile changed his mind. “Gabi called to ask me about my user experience, go over the issues, and talk about how they could make it work for us.” With Gabi’s expert help, Jason soon realized that Wildnote was designed for just the type of work he was doing. He also learned how Wildnote’s Professional Services department could create the exact custom export that his client required. Together, they put the right solution in place. As a result, each week, roughly 250 individual field surveys and associated photos are now easily merged into a single document for his client’s report. “We now have a custom photo-management system that gives us the photo log and data report that we need wrapped into one,” Jason said.

Caskey Biological is currently using Wildnote on multiple, biological-monitoring projects for utility pipeline construction and maintenance in the Mojave Desert. The projects might span 20 feet or cover a hundred miles through desert tortoise habitat. Desert tortoises are a protected species and biologists need to be specially qualified to monitor, survey, and submit the required daily reports. Surveys include active work areas and a buffer zone on each job site.

Protecting endangered species requires patience. “Spring and fall are active seasons. Yesterday we saw four tortoises,” Jason said.

“Our preference is to never disturb or touch them. We have the authority to stop work and we will always give a tortoise time to vacate the area on its own. Sometimes we have an authorized person relocate the tortoise off a road or job site, but still within its ranging area. Then we monitor to make sure it is staying out of danger.”



Gopherus agassizii

Desert tortoises use multiple burrows. When an active burrow is found, it is flagged so it can be avoided by the utility. If a tortoise is found inside, it might be moved to another burrow. Inactive burrows are collapsed to deter the tortoises from coming back to the site. Each activity is meticulously documented and reported.

“Wildnote has really helped us solve the time consumption problems that come with field documentation, and also managing and reporting that documentation in the office. Additionally, I know the formatting for everyone’s reports will be the same.”

With Wildnote, biologists in the field no longer have to tote laptops and cameras around to log photos and type up their observations or spend time after the data is collected transcribing handwritten notes and attaching photos at the end of the day. Now they can use their smartphones or tablets to enter survey data as the day progresses. And because Wildnote is iOS and Android compatible, biologists can use their existing devices. Eliminating the need to transcribe handwritten notes also helps reduce errors and retain the integrity of the collected data.



Jason said that because employees easily took to the new technology, it was quick to deploy.

“Some old-school folks needed help getting going, now they all love it! The duplication feature is popular and the feedback from the field has been positive. About five users had concerns or questions, but now everybody is on board.”

Wildnote provided onboarding support and Jason created a user document to help new users transition easily.

Project Savings

Jason estimates that each user in the field saves about an hour per day while he further saves 10-12 hours each week on administrative tasks. That translates into financial savings of \$900-\$1100 per week for his time and roughly \$5000 per week for the field biologists.

“Our client loves it and is considering requiring their other contractors to adopt Wildnote. They like the uniformity of the reports and we’ve been able to save them money, so it makes us more competitive.”

Conclusion

Proven to save time and money, reduce errors, improve deliverables, and please clients, digital technology is here to stay. Wildnote’s robust features, easy user interface and superior customer service gives Caskey Biological a competitive edge and a better quality of life.

“The biggest value to me is easily the amount of time I have saved. It has essentially given me an entire day per week to focus on other tasks within our business.” Jason said. “I have a 3-month-old daughter and my wife and I run the business.”



“I’m very happy with the amount of time and money saved and working with Wildnote has been great. We will be using Wildnote for years to come.”

Additional Information:

[To learn more about Wildnote](#)

To read more about Caskey Biological and the services they offer <http://www.caskeybiological.com/>