

CASE STUDY

Charles King Company



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STEVE RADAICH

General Manager at Charles King Company



samsara



Charles King Company, a turn-key bypass pumping contractor, partnered with Samsara to enhance their services and help ensure pump uptime for their clients.

Located in Southern California, Charles King Company is the go-to bypass pumping contractor for some of the largest wastewater and stormwater projects in the region. Municipalities and contractors rely on their full service approach to the temporary pump systems they provide and their rapid response in emergency situations.

Looking to deliver the best possible service and reliability to their clients, Charles King Company partnered with Samsara to provide real-time remote monitoring and controls for their systems. This provides additional safeguards to system reliability as well as enhanced visibility of levels, flows, pressures, and other key data points. This is a big priority for Steve Radaich, General Manager at Charles King. "We're in a zero-spill business here. We absolutely cannot have any incidents of overflows, and Samsara helps us achieve that." Read on to learn more about Charles King and why they ultimately decided to partner with Samsara.

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Ensuring uptime with 24/7 monitoring

Charles King Company's pumping systems play an absolutely vital role in emergency and planned projects for treatment plants, pump stations, and collection systems. Each unit works to safely divert water and maintain normal well levels whenever permanent pumps, or gravity systems, are taken out of service for repairs. With potential regulatory fines and serious environmental consequences in the event of a spill, keeping a close eye on these pumps and well levels is mission critical for Charles King and the operations that they support.

"These pump systems are absolutely critical. If there is any downtime with the equipment, it can result in a sewage overflow," said Radaich. "We chose to work with Samsara for remote monitoring to help minimize that risk and provide added peace of mind for our clients."

Using Samsara Industrial Controllers, Charles King can collect data on all of their most important parameters, like pump speed, wet well levels, discharge pressures from pressure transducers, and flows from magnetic flow meters. Each of these parameters is surfaced in Samsara dashboards in real-time and simultaneously logged in the Samsara cloud. This allows Charles King to view historical trends for troubleshooting and reporting.

These dashboards are accessible from any web browser and are mobile friendly to boot, which is particularly valuable for Charles King. "Our client's projects go on 24/7, so being able to see what's going on right from your phone makes it easy to stay on top of the system day and night," said Radaich.

In addition to being able to collect data directly from sensors and pump controllers, Samsara provides native support for CAN-based assets, like the diesel and electric motors that drive their pumps. This means that Charles King is able to monitor engine diagnostics, on/off status, diesel exhaust fluid (DEF) levels, and battery voltage on their diesel-based pumps, giving them a truly complete view of their equipment for troubleshooting.

"Samsara gives us an opportunity to view critical engine data like diagnostic fault codes for troubleshooting," said Radaich. "If a unit has an issue, in most cases we're able to figure out what the problem is remotely."

Easy and fast setup for every client job

While Charles King's clients typically have similar needs, each job remains somewhat unique and therefore has different monitoring requirements. For example, standby systems used to augment permanent pump stations during the wet weather season are only run intermittently as opposed to bypass systems that are usually run continuously. Without regular runtime to recharge the pump battery in standby systems, battery drain is more likely to occur, which can cause downtime.

Fortunately, Charles King has set up Samsara so that it's easy to quickly make changes and add new data points to their dashboards, including pump battery voltage. "Our technicians simply bring out the Samsara unit, plug our equipment in, and that's it. If we decide we want to make any adjustments to dashboards or setpoints, we can do it all remotely. We don't actually have to be on-site," Radaich said. "With this setup, we'll be able to start monitoring our turn-key systems from day one with very little additional configuration."

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Advanced alerts for more proactive service

Charles King Company also makes use of alerts within the Samsara platform to keep tabs on all of their important parameters. Prior to Samsara, the company used analog auto-dialers to alert on high water levels, but their utility was limited. Because just one alert threshold could be set up per auto-dialer, technicians would not get a phone call until water was already at an emergency level.

Now with Samsara, Charles King can configure multiple, escalating alerts with different criticality levels at every well site. These alerts can be set up to notify the team gradually as water levels rise, with separate notifications triggered at different alarm setpoints. This allows the team to act sooner, addressing rising levels proactively, before they lead to a more serious problem.

“Using Samsara, we’ve set up several lower level alerts that give us an earlier warning. This is something that helps us avoid hitting emergency level alerts altogether,” said Radaich.

Remote monitoring as a service, enabled by unlimited users

Using Samsara, Charles King is able to add an unlimited number of users to the system and offer new monitoring and alerting services to all of their clients.

“We’ve seen other technologies that will limit the number of users you can add to the system. With Samsara, there is no limit, we can add hundreds of users if we want to” said Radaich.

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“That allows us to bundle remote monitoring as a value added service for all of our clients, without significant costs on our end,” Radaich said. “We can easily provide all of this information to every client stakeholder.”

And thanks to Samsara’s mobile dashboards, it’s easy for Charles King to demonstrate the value of remote monitoring and wow their customers. “I met with a contractor yesterday who asked me about remote monitoring, and there was no better tool than pulling up the Samsara dashboard on my phone and showing our active projects” said Radaich. “The contractor was instantly impressed that this was included in our contract.”

Significant value-add for Charles King’s clients

“On the whole, Samsara is a big value add for our customers,” said Radaich. “Just recently, we had a client working on a large treatment plant project.



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They needed to set up a temporary flow meter and push data into the plant’s existing SCADA system” said Radaich. “Instead of taking on the cost of setting that up for a three month project, we were able to offer that client the flow data they needed straight from our equipment using Samsara and save them a whole lot of capital.”

In another case, Long Beach Water Department’s Manager of Engineering, Jinny Huang-Uy is already seeing the benefits of the Samsara system. “Charles King’s remote monitoring application has been helpful in checking our sewer bypass system wet well levels, flow, and pump information during our sewer lift station rehabilitation project. Being able to view the status of the bypass system in real-time from any computer or phone is useful and convenient.”

“After our clients see what we can provide with Samsara, I see more of them making it a requirement for their projects as time goes on.” said Radaich.

“I’ve been in this business for almost 20 years, and I would say this has been one of the most significant technologies we’ve ever implemented.”

Find out how the Samsara platform can help your organization. Visit samsara.com/industrial-trial

