Case Study

non-profit

RICOH
imagine. change.

The Tip of the Mitt Watershed Council

Finding a Digital Camera Solution with the Capabilities Needed for Complex, Outdoor Shoreline Surveys

"We really needed a durable camera that could stand up to extreme outdoor conditions while, at the same time, ensuring the accurate collection of data. The G700SE is the perfect fit."

—Kevin Cronk, monitoring research coordinator for the Watershed Council

ABOUT THE CUSTOMER

The Tip of the Mitt Watershed Council is a non-profit organization dedicated to protecting the lakes, streams, wetlands and groundwater of Northern Michigan. It accomplishes these goals through advocacy, innovative education, technically sound water quality monitoring, thorough research and restoration actions.

With a staff of approximately 10 persons and a host of volunteers throughout Northern Michigan, the Watershed Council is the lead organization for water resources protection in four counties, comprised of more than 2,500 miles of rivers and streams, approximately 1,800 lakes including 14 larger than 1,000 acres, and 339,000 acres of wetlands.

CHALLENGE

The Watershed Council conducts an ongoing water quality monitoring program that evaluates water, shoreline and plant conditions on approximately 60 water bodies, including lakes, rivers and streams. Prior to 2005, the organization used a point-and-shoot digital camera and a separate GPS device to take pictures documenting shoreline conditions and identify the relevant GPS location. A written log was kept to identify the number of pictures associated with each GPS location. However, a cumbersome manual process was required to match the pictures and GPS data once the surveyor returned to the Watershed Council's offices.

"We go to each individual property on our shorelines and look at all the property characteristics that could affect water quality," said Kevin Cronk, monitoring research coordinator for the Watershed Council. "This includes how much vegetation is on the shoreline, whether it has seawalls or is natural, and whether signs of pollution are present. We use a camera extensively to document all of these conditions at every shoreline property. It was a real challenge keeping track of these photos and indexing them with the right GPS data back at our office."

CHALLENGE

- Find a digital camera solution with the rugged construction, data storage capability and data management software needed to streamline shoreline survey activities

SOLUTION

- The water resistant, rugged G700SE Dynamic Capture camera with attachable, highly accurate GPS module, multiple memo fields, bar code scanner and data management software to streamline data retrieval and storage

RESULTS

- Reliable, accurate performance in the field and significant reduction in staff time devoted to data management

Case Study

RICOH
imagine. change.

In a given survey, the Watershed Council's staff would spend approximately 50 hours sorting and matching the data recorded. Another potential problem was that the point-and-shoot digital camera was not water resistant.

Around 2005, Cronk became aware of a Ricoh camera solution, the Pro G3, which was being used for similar surveys by a neighboring water conservation organization. The camera had GPS and memo fields that could be associated with each photo and software to automate the process of downloading and managing the photos at the office. At a Watershed Council board meeting, Cronk expressed his frustration with the inefficient manual workflow for sorting pictures and the favorable information he had received concerning the Ricoh solution. A board member then offered to fund the purchase of the Ricoh solution. Cronk was immediately pleased with the efficiencies gained with the Ricoh camera and software for processing the data. "With the Ricoh solution, we were able to process the data two to three times faster than before," said Cronk.

A few years ago, the Watershed Council attempted to upgrade capabilities with a competitive camera model, but Cronk quickly realized it did not deliver the same efficiencies as the Ricoh camera. This led the Watershed Council to recently acquire the Ricoh G700SE Dynamic Capture camera solution.

SOLUTION

Cronk is pleased with the advanced features of the G700SE and the many ways it will enhance the work of the Watershed Council. "We really like the accuracy of the camera's attachable GP-1 GPS module," said Cronk. "Coupled with the multiple memo fields, we can attach location data and other critical information with each photo, such as the presence of erosion and greenbelt status."

Cronk anticipates keeping a paper log as a back-up index for the data collected in the field. The camera's bar code reader may be employed to associate these paper records with the stored data on the camera. Additionally, Cronk appreciates the G700SE's rugged, shock, dust and water resistant construction, which is ideal for the survey work that the Watershed Council performs. "We perform our shoreline surveys from a kayak," said Cronk. "We really needed a durable camera that could stand up to extreme outdoor conditions while, at the same time, ensuring the accurate collection of data. The G700SE is the perfect fit."

Most of all, Cronk looks forward to the streamlined workflow made possible by the G700SE's included software. The software enables computer files to be renamed based on the contents of the camera memos and moved to the desired folder. The camera memo information can also be output in multiple file formats. "Not having the Ricoh solution last year cost us approximately 50 extra hours in staff time devoted to our survey projects. We really knew we needed to get the Ricoh solution back," Cronk explained.

RESULTS

Cronk anticipates that the G700SE solution will save more than $2,200 per survey in labor costs associated with processing the survey data.

Additionally, Cronk appreciates the intrinsic value of the accurate collection of data that the G700SE delivers. "It is much easier to ensure that we are associating the right photos with shoreline locations using the G700SE software than it was with the manual process. That certainly gives me peace of mind."

Finally, Cronk is pleased to have a rugged camera that can stand up to the extreme conditions of the shoreline survey work. "Our survey work is just the kind of application that the G700SE is designed to perform. We are confident it will provide us with reliable, accurate performance."

www.ricoh-usa.com