



GIS

## Marin Municipal Water District Turns Red-Lines into Efficient Green Workflow with Wacom Interactive Pen Display

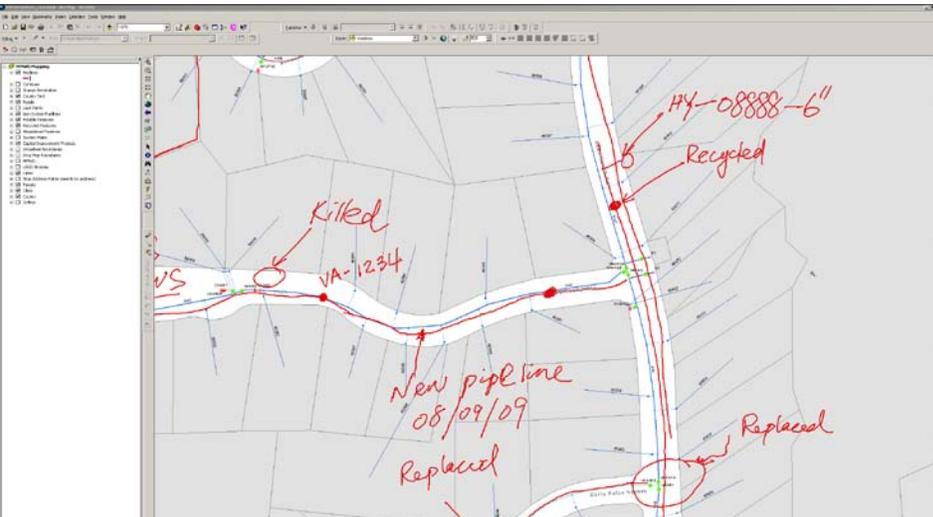
“It was clear from the start that Wacom’s direct pen on screen technology would eliminate the paper trail, reduce backlogs, shorten the work cycle and enable us to have red-lined changes reflected across the enterprise 24 hours after they are made. It is exactly what we need to modernize our workflow.”

– Gavin McGhie,  
GIS Coordinator at  
MMWD

Like many water agencies, the Marin Municipal Water District (MMWD) has used a traditional paper-based workflow integrating ESRI’s ArcGIS software for design, tracking and information updates throughout the 147 square-mile system. With 190,000 customers in south and central Marin County and nearly 1,000 miles of potable and recycled pipelines, MMWD is constantly updating its GIS data, resulting in an influx of paper usage, data management risk and certain inefficiencies. To streamline its workflow, MMWD turned to Wacom® interactive pen display technology for a completely digitized solution.

Gavin McGhie, GIS Coordinator at MMWD, worked within the agency’s IT department in conjunction with the engineering department to find a digital solution for red-lining and processing information. After testing multiple touch screen options, McGhie was introduced to the Wacom DTZ-2100 interactive pen display and a solution was found. “It was clear from the start that Wacom’s direct pen-on-screen technology would eliminate the paper trail, reduce backlogs, shorten the work cycle and enable us to have red-lined changes reflected across the enterprise 24 hours after they are made. It is exactly what we need to modernize our workflow.”

Traditionally, MMWD engineers would return from the field, grab a 2-by-3 foot paper drop sheet and red-line it with a colored pencil. Then, another person would update the GIS information using ArcGIS and reprint the sheet. With 400 drop sheets gridding the district’s system, the process wasted paper, plotting time and ink.



Red-lining with a Wacom interactive pen display is easy, fast and highly efficient.

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“By allowing workers to red-line directly on the computer screen, the interactive pen display will eliminate paper from the GIS process, greatly improving efficiency throughout the entire system, significantly reducing costs,” says McGhie. “I estimate that MMWD has been replacing between 100 and 200 drop sheets annually. With Wacom in the workflow, we probably won’t be replacing any.”

Wacom’s innovative technology allows MMWD engineers to draw directly on the 21.3” LCD monitor, providing comfortable, efficient and fast input. The display sits in a central location in the MMWD engineering department, where anyone can access it. McGhie says that everyone who has used the Wacom display found it to be an easy-to-use, non-intimidating solution. “Once they locate the area they’re making a notation about, it’s as easy as writing on paper... except Wacom pen edits are simpler and don’t smudge,” he says.

From a risk management standpoint, digital red-lining will further MMWD’s document management goal of archiving paper in favor of electronic versions. “We know as well as anybody that if the paper is destroyed or lost, you’re out of luck. Digital input with the interactive pen display definitely flows into that document management philosophy,” McGhie says.

Wacom’s interactive pen display will also shorten the work cycle by enabling MMWD to update its GIS database within 24 hours, eliminating backlogs and ensuring everyone is using the same, and most current data. Instead of waiting days for drop sheets to be reprinted, every night an administrator will convert digital red-lines into a GIS shapefile format for display to all enterprise users the next day.

“With paper, the red-lines keep building up, and we sometimes have as much as six months of red-lining on a single drop sheet without having that applied to GIS,” McGhie says. “When this happens, the field crews and everybody else depending on GIS aren’t seeing the most current data. However, with Wacom’s interactive pen display in our workflow, there is no doubt that our overall efficiency will increase system-wide. You really can’t put a price on that.”

Please consult [www.wacom.com/GIS](http://www.wacom.com/GIS) for more information on Wacom, the DTZ-2100 and other interactive pen displays.

