The St. Johns River Water Management District

Customer Success Story

Autodesk® Design Review
AutoCAD®

Protecting Resources— More Efficiently

E-permitting saves applicants and internal reviewers time thanks to Autodesk Design Review and DWF

Project Summary

A state agency based in northeast Florida, the St. Johns River Water Management District (SJRWMD) is charged with implementing a regional strategy to ensure sufficient water is available for users and the environment while protecting water resources within 18 counties. It carries out its mission by developing a water supply plan and through permitting the use of water resources in the region, preserving and restoring wetlands, mapping water resources, and conducting scientific research. With land development booming in the region, issuing water use and environmental resource permits is one of SJRWMD's most important tasks, and the agency grants more than 4,000 permits each year. To make the process more efficient for the agency and the public, SJRWMD began an e-permitting program based around Autodesk® Design Review software and leveraging DWF™ files. E-permitting helps the agency to:

- Begin the design review process at least three days sooner

- Save the public time when applying for permits

- Improve access to plans for review staff and the public

- Streamline collaboration between the engineers and environmental scientists who review permit applications

The Challenge

Streamlining the Permitting Process
Before 2004, contractors, developers, and other citizens who needed permits from SJRWMD were required to submit five paper copies of all plans along with their applications. Because plans often included multiple pages, assembling the sets took time and entailed printing costs for applicants. SJRWMD processed and sent the plans to internal engineering and scientific reviewers—a procedure that took at least three days. Reviewers then marked up the drawings manually, collaborating with one another to ensure that the plans complied with all regulations. If not, the reviewers communicated problems to the applicants for correction, and the whole process began again.

"Every day, we receive permit applications at one of the four local service centers in the region we serve," says Mike Register, director of the Division of Surface Water Management for SJRWMD. "Getting paper applications to the assigned reviewers took three days or more. In addition, it was both costly and inconvenient for applicants to use paper. We saw electronic permitting as a win for both our agency and the people seeking permits."

The agency recognized the potential of e-permitting—and a few possible pitfalls. First of all, the agency wanted to base its e-permitting process around technologies that enabled all-digital design reviews with measurement

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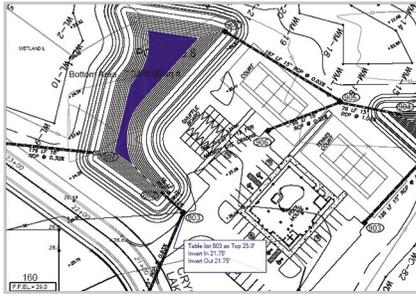
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Mike Register,
Director of the Division of
Surface Water Management,
St. Johns River Water Management District

capabilities. It was also important to gain the support of the engineering community that developed and submitted plans for permitting. Winning their cooperation required ensuring the security of the data behind their designs.

"We needed a solution that was secure and easy for applicants and that allowed us to view and mark up drawings efficiently," explains Peggy White, SJRWMD's CIO and director of the Department of Information Resources.

The Solution
SJRWMD investigated technologies that might meet its e-permitting needs, and it decided that Autodesk offered a solution that fit perfectly: Autodesk Design Review and the DWF file specification. The agency then built an all-digital e-permitting process around the viewing, markup, and measurement capabilities within Autodesk Design Review. DWF technology enables delivery of applicant design data to reviewers.

A compact file format, DWF is easy to use, secure, and readily available. Applicants using Autodesk design tools, including AutoCAD®, Autodesk Map® 3D, and Autodesk® Civil 3D® software applications, simply publish DWF design files from within their design tools and submit them electronically to SJRWMD. Applicants not using Autodesk software, or using Autodesk software released prior to 2005, can download the free* Autodesk® DWF™ Writer to publish DWF files from any application.

Engineers and scientists within the agency use Autodesk Design Review to view and mark up the published designs. Confirming properly sized drainage areas, water flow distances, and ponds is one of the essential parts of the review process. Using Autodesk Design Review, reviewers can make precise measurements of elements within DWF files without resorting to tedious manual methods, such as using a planimeter. If applications are not complete or fully compliant, the reviewers use the marked up DWF file to help document needed changes for applicants. The applicants can then quickly make the changes using their design software and submit a new DWF file.

"Internally, our reviewers are able to view, measure, and mark up designs and share comments electronically," says White. "Applicants like the fact

that DWF is secure and more efficient than paper. We haven't even made e-permitting mandatory— we haven't needed to. Once applicants use e-permitting, they do not go back to paper."

Extending Efficient Processes Across Florida
SJRWMD's success with e-permitting has inspired Florida's four other water management districts to initiate similar programs. As SJRWMD moved forward with e-permitting, agency staffers collaborated regularly with other districts to share insights and lessons learned. Other agencies are likely to adopt the DWF format for plans and drawing as part of their electronic permitting process.

"Soon applicants who work with multiple water management districts will be able to follow a similar e-permitting process," reports Judy Fuetter, SJRWMD's application development coordinator. "E-permitting is more efficient for applicants and more efficient for us."

The Result
Processing Applications Three Days Sooner
E-permitting with Autodesk Design Review and DWF has resulted in measurable efficiencies for SJRWMD. Register points to the advantages his team enjoys with Autodesk Design Review, "Reviewing documents with Autodesk Design Review is very efficient, especially when applications include dozens of sheets of plans. We can move between sheets with the click of a button, and zoom in on details in the drawing. It can save us time checking measurements without having to rely on the use of a planimeter or other manual methods."

According to White, e-permitting has resulted in impressive time and space savings. She says, "With paper, it takes us about three days to process permit applications and get the plans to reviewers. Electronic permits only take about 30 minutes to process. We are saving space too. Reviewers work on as many as 80 permit applications at a time. That can mean having to manage hundreds of individual paper drawings, but electronic applications do not take up any physical space at all."

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