



## Washington's Grand Coulee Dam Deploys Waterproof Content Management with InnoCielo Meridian Enterprise



Customer Story



### Customer Overview

Washington's Grand Coulee Dam is decidedly one of the most impressive infrastructure projects in the United States. In fact, this massive hydro-power facility is one of the largest concrete structures ever built. Located on the main stem of the Columbia River about 90 miles west of Spokane, Washington, the barricade is 5,233 feet long, 550 feet high, and contains 11,975,500 cubic yards of concrete.

The power facilities at Grand Coulee Dam consist of a powerplant on both the left and right sides of the spillway on the downstream face of the dam. A third power plant is located on the right bank just downstream of Grand Coulee Dam.

To keep this enormous amount of concrete, powerlines, hydro systems, pumps and circuit breakers in top shape, the Bureau of Reclamation in the US Department of the Interior, is in charge of conducting continuous maintenance on the dam and its related power infrastructure. More than 300 people from different disciplines are involved, including engineering, maintenance and administration.

### Challenges

The CAD and engineering group at the Grand Coulee Dam has been tasked to keep more than 200,000 drawings that outline the dam under tight control. The department of eight CAD specialists manages all the information that relates to the dam, including geological drawings, electrical drawings, irrigation drawings, architectural drawings and also mechanical drawings.

Standardized on AutoCAD, CAD drawings and related maintenance information is shared frequently among the drafters and engineers at the dam who are doing field work. "We always have ongoing work like putting in new breakers, which happens at a large scale and takes a lot of drawings," says Clark Perman, CAD manager for the US Bureau of Reclamation at Grand Coulee Dam.

### A New Content Management Solution

Perman's group implemented AutoManager WorkFlow (now discontinued) at the end of the 20<sup>th</sup> century as their data management system to manage all design data. In 2005, the group jumped the technology gap and upgraded to InnoCielo Meridian Enterprise (formerly AutoManager Meridian) in order to take advantage of its powerful enterprise-wide collaboration and workflow features.

DataCore Technology, an EDM consultancy that specializes in the asset management needs of utilities across the United States, assisted the US Bureau of Reclamation to roll out and implement InnoCielo Meridian Enterprise. "DataCore has been terrific in helping to implement the system and supporting us along the way," says Perman. "The fact that they're located remotely has never made any difference to the quality of their support. They've been timely, thorough and available."



### Customer Profile

Washington's Grand Coulee Dam managed by the US Bureau of Reclamation.

### Industry

Utilities

### BlueCielo Solution

InnoCielo Meridian Enterprise

### Application Environment

- AutoCAD

### Key Advantages

- Save time with fast document searching
- Efficient group collaboration with customized workflow
- Cut down on paper cost by conveniently managing scanned drawings
- Easy document access in the office and in the field

Implemented by





With thousands of documents in its system, Perman's group is still in the process of scanning and digitizing drawings. Some of these drawings date back to the time that the dam designers used card indexes to manage drawings.

Perman points out the significant impact InnoCielo Meridian Enterprise has had in terms of time savings. "Right now, we have 45,000 records in InnoCielo Meridian Enterprise. We have about 10,000 CAD drawings in there and the rest are scanned images," he says. "It is much nicer to have the system do the searching for you than to go through a bunch of cards."

### A Flexible and Versatile Solution

Besides InnoCielo Meridian Enterprise's versatile searching tools, Perman is very satisfied with the product's workflow and Work Area features. Work Areas are pre-defined stages in a workflow with a unique set of revision, security and editing settings.

"We have set up workflow in such a way that when an engineer checks out a drawing and locks it in his [Work Area] he can make red and green changes to that drawing. What the electrician needs to take out is added in green and what needs to be added is in red," explains Perman.

"The engineer prints this out and gives this to the electrician and they do the job. When that is done we're automatically notified via email. The drafter then goes into the Work Area and changes the layers on the drawing so that the final version of the drawing is released. The engineer then reviews the final version and notifies us that it is okay, or if he needs more changes he can let us know as well via [InnoCielo Meridian Enterprise's] redlining tools."

Other features Perman likes are InnoCielo Meridian Enterprise's convenient file structure that allows people to easily create a drawing hierarchy to categorize drawings. He also finds the system's collections very helpful. "One of my favorite features is to create collections. We can easily put them in Excel, print them out and share the information on a whole list of drawings with different people. That's a really nice feature."

Perman also mentions the title block-database synchronization as a great time-saver for his department. "I like how easy it is to change the items on the index cards and linking the title block information to the drawings. The synchronization is very nice."

### Drawings at our Fingertips

Overall, Perman is very happy with the implementation of InnoCielo Meridian Enterprise and the benefits it has achieved. "InnoCielo Meridian Enterprise works very well. We have a lot of people that use it. In fact, I just had a power plant operator tell me today how much he appreciates using it." According to Perman, people mostly like using the system because it has made it much easier to find drawings when they are in the field. "People love the web client. They can just dig up the drawings to view and print drawings. They don't even have to be trained," he says.

"InnoCielo Meridian Enterprise allows us to have up-to-date drawings at our fingertips no matter where we're at on the project," he says.

Perman never measured the monetary impact of InnoCielo Meridian Enterprise, but he knows "it is a lot". "Before we had content management, people had to come to our office to get the drawings. Taking into account that our project spreads 15 miles across, you can imagine how much time was wasted and how much we're saving now."

"InnoCielo Meridian Enterprise allows us to have up-to-date drawings at our fingertips no matter where we are on the project." – Clark Perman, CAD Manager, Grand Coulee Dam



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