

VUEWorks Success Story

Asset Management System allows Northstar CSD to meet expectations for a well run district with a high level of service



About Northstar CSD

The Northstar Community Services District (NCSD) was founded in 1991 under Government Code 61600 as a local government entity to serve the Northstar Community located near Truckee, California, with governmental services. NCSD is classified as a “Special District”, a form of small local government that can provide a higher-level of service to a small residential community than what the County can provide. NCSD provides water, sewer, road care, fire, trails, snow removal, lighting, and solid waste services to approximately 3000 service connections, as well as a ski resort, an extensive mixed-use commercial and residential ski village, and a golf course. NCSD’s services are funded by property taxes, a road tax, and water, sewer and solid waste user fees. Infrastructure development is financed by Mello-Roos bonds, which the District sponsors.

Business Challenge

The Northstar community was originally developed in the 1970s, but due to real estate market conditions the Master Plan was never fully built out. A special district was formed in 1991 with a mandate to operate and maintain both the existing, aging infrastructure and future development. In 2004 a small group of developers began aggressively building out the remainder of the Master Plan. As a result of this new development, the District is forecasting a 100% increase in demand for its water and sewer services over the next fifteen years, with a corresponding budget increase from \$12.5 million in 2007 to approximately \$40 million in 2025. This budget increase includes such items as the operation and maintenance of a new membrane filtration water

treatment plant, new sewer lift stations and new water transmission lines, storage tanks, and lift stations, and a second Fire Department.

Prior to the 2004 building boom, the NCSD managed its assets primarily using paper maps that drew upon original AutoCAD files. Information about the District’s assets and their condition consisted of individual knowledge, intuition, and incomplete legacy data contained in Excel spreadsheets and spiral-bound notebooks.

The new development coincided with a transition to a younger management team that was comfortable using computers and technology, and was eager to implement ‘best practices’ for asset management utilized by other Utilities and Public Works departments.

“Our residents expect a well-run District with a high level of service, accountability, and transparency.”

– Ryen Tarbet, Northstar CSD Information Systems Supervisor

At that time, the District wanted to greatly improve its picture of the real cost of operating and maintaining its water, sewer, and road systems individually. This is not uncommon, as many utilities and other service providers in operation today use non-asset specific methods to track operation and maintenance costs. In addition to tracking costs, the District desired to improve its ability to forecast future costs to run its 1970s era assets as well as how much it was going to cost the District to own and operate individual assets that were currently under construction and would soon become a part of the District’s systems.

The majority of the district’s infrastructure maintenance budget comes from property taxes, one time water and sewer connection fees, and recurring user fees (e.g. bi-

monthly billings). Because the District is bound to use fund based accounting practices, its water, sewer, and solid waste services are run much like a business. In general, fees collected from customers should cover the costs of maintaining these services into perpetuity. Revenues collected in excess of costs must be returned to the public. Through implementation of the VUEWorks asset management system, capital replacement costs, and operation and maintenance costs by asset are easily tracked and forecasted.

The District also sponsors a Mello-Roos bond, which is a special tax levied on property owners to pay for infrastructure such as roads, water transmission lines, etc that make a development possible. The dollars raised in the Mello-Roos bond are used by developers to build infrastructure that, when complete, is turned over to the District for perpetual maintenance and operation. "Understandably, property owners take a keen interest in how their taxes are being spent," said Ryen Tarbet, Information Systems Supervisor, Northstar CSD. "The District has an elected Board of Directors that oversees our activities, and these members are also full-time Northstar residents. Our residents expect a well-run district with a high level of service, accountability, and transparency."

The District decided to invest in an Asset Management System that would:

- ◆ make information about assets both "transparent" and readily available to those who needed it. This included District employees, contractors, developers, and residents.
- ◆ provide a straightforward method for tracking costs on both existing assets and new assets as they come online.
- ◆ track reimbursable labor, materials, and equipment on new, large infrastructure projects that will become the property of the District when complete.
- ◆ help determine proper staffing levels.
- ◆ track asset condition and perform risk analysis.

Solution Overview

The district evaluated a number of asset management systems before selecting VUEWorks™

(www.vueworks.com), a web-based suite of GIS-integrated software modules packed with powerful features to help local governments, utilities, and other organizations better serve their constituents with tools for everything from map viewing to asset management. VUEWorks currently utilizes ESRI's ArcIMS for the map viewing (soon to support ArcGIS Server) and is built with the Microsoft .NET platform.

Other Solutions evaluated included gbaMaster, Hansen, Azteca, and Cartegraph.

"One of the companies we contacted was Data Transfer Solutions of Orlando, Florida, which provides services and solutions for asset management. When we discussed the breadth of our asset management requirements, they introduced us to VUEWorks, presenting their solution as the most complete asset management tracking system available," said Mr. Tarbet.

Data Transfer Solutions maintains a close business relationship with VUEWorks. The role DTS played in the NCSD's use of VUEWorks was to consult to the District on such topics as: training in the use of the software, computer hardware recommendations, and data collection and loading procedures to get VUEWorks operational with a good base line information. In short, VUEWorks supplies the software, DTS helps people use it.

Business Benefits

"VUEWorks is an intuitive, highly-configurable asset management system that gives us the flexibility and information transparency we require," commented Mr. Tarbet.

The fact that VUEWorks is a web-based application was a major selling point to upper management, says Mr. Tarbet. "Data transparency is vital. With VUEWorks, information about our assets can be accessed from anywhere via a web browser. Crews can fill in work orders directly from their trucks via mobile phones or wireless internet connections from their ruggedized laptops. Because it's a hosted application we don't have to hire IT staff to run it and keep it updated, and having the server offsite means we don't need to worry about protecting the data from natural disasters such as fire, earthquakes, or floods.

"The editing capabilities are both flexible and powerful," continued Mr. Tarbet. "For example, we can edit spatial

data inside VUEWorks and have that edit simultaneously performed on the underlying GIS data. It provides us with a clear migration pathway to ArcGIS Server. Its excellent CIP (Capital Improvement Planning) module provides a choice of deterioration curves that are highly relevant to real world situations. The software makes use of engineering cost indexes, and utilizes risk-based asset management philosophies.”

Another feature that sold Northstar on VUEWorks was its usefulness for visually communicating information. Different types of assets, for example, water and sewer, can be color-coded and overlaid on the GPS survey data. “The visual elegance of the VUEWorks interface blew us away in our initial demo,” reports Mr. Tarbet. “It was very easy for anyone, regardless of their familiarity with computers or this application, to understand what is going on. It is a valuable tool both for our staff and to show our constituents what we are doing -- reassuring them that we are caring and feeding for their water system,” said Mr. Tarbet.

At present, a number of NCSD staff spend a large amount of time working with developers on Mello-Roos funded infrastructure projects. Staff labor spent working on these projects is reimbursable because that labor time is part of the overall cost to construct the infrastructure. VUEWorks provides an easy mechanism for tracking reimbursable costs. “VUEWorks lets us set up reimbursable projects on the work order and track which crew did the work and also track any equipment or inventory used. Some of our engineers may do plan reviews to ensure that we’re ok with the design of a major new system or asset, which is important as we will inherit the infrastructure that’s getting built around here and have to maintain these assets post-construction. The costs we rack up to review designs are reimbursable. VUEWorks provides a great way to track these reimbursable costs. To build on the idea of tracking costs - when the new system is complete, we can ask the developer for the total construction cost (which will include our reimbursable costs), and that becomes the cost basis for that new asset. We can now depreciate the asset over time in the VUEWorks Valuation module. We can also immediately assign

periodic operations and maintenance work orders to that asset and make sure it functions properly throughout its designed life. We never had the ability to systematically do this level of tracking prior to acquiring VUEWorks,” said Mr. Tarbet.

The NCSD gives high marks to VUEWorks for customer specific support and training. “When we had a time recording requirement that was not part of the existing VUEWorks solution, the company developed a new module, utilizing our input and specifications. One of the capabilities that we wanted was a way to capture employee time within a single application. We didn’t want employees to have to record their time twice – once on VUEWorks work orders and again in a time reporting package. The new VUEWorks Time Recorder is a perfect, elegant solution to this problem.”

Continued Mr. Tarbet, “As to the training, The VUEWorks trainer is a professional engineer who thoroughly understood both the product and our workflow issues. He answered our questions and had excellent ideas and approaches to training our staff.”

Bottom Line

“VUEWorks provides transparent cost data for operating our water and sewer systems, and has allowed Northstar to begin developing our first Capital Improvement Planning (CIP) budgets based not only on the useful life of the asset, but the risks involved when that asset fails,” said Mr. Tarbet.

Northstar plans to have VUEWorks fully deployed across all its departments by mid 2009.

“Any new system can present challenges with adoption by staff, but with VUEWorks we have found that the inviting interface captures the attention of our staff and has made it easier to adopt than we expected,” concluded Mr. Tarbet.



For more information about this success story or VUEWorks solutions, contact Jay Couture at +1 603 228-8100 or via Email: info@vueworks.com.

SIDEBAR TO ADD:

VUEWorks Usage by Northstar CSD

Accounting:

VUEWorks feeds labor/payroll information directly into the Springbrook accounting software.

- ◆ All fixed asset valuation & depreciation is performed in VUEWorks by the controller for financial reporting. This data is imported from VW into Springbrook for roll-up into the financials.
- ◆ GASB34

Administration/General Management

- ◆ The GM has direct access to VW for specific operational reports, CIP reports, and to monitor costs tied to specific projects to include reimbursable (e.g. Mello-Roos) projects.

Public Works

The Director of Public works uses VW for CIP planning, project management, and Operations & Maintenance program planning.

Utilities – Water, Sewer, Roads, Snow Removal, Refuse, Trails

- ◆ VW is used extensively for work scheduling, time recording, and cost estimating and tracking.
- ◆ Inventory is monitored.

Information Services

- ◆ VUEWorks is used as the primary viewing and query “view” into the District’s GIS. District staff are referred to the VW intranet site to “self service” their GIS and asset information / data needs.
- ◆ IS Dept is also the Service Call point of contact for the public.

Fire Department

- ◆ Hydrant flushing and flow monitoring program
- ◆ Backflow Prevention Program

Residential and Commercial Fire Prevention Inspection Program is scheduled through VW.