

OPTIMIZING THE CUSTOMER SITE RETROFIT PROCESS WHILE BUILDING CONFIDENCE IN PUBLIC OUTREACH

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So divinely is the world organized that every one of us, in our place and time, is in balance with everything else.

Johann Wolfgang von Goethe

German dramatist, novelist, poet, & scientist (1749 - 1832)

If only life were that simple. As the global and local population grows, so too does the demand for water. Redwood City is 100% reliant on one source of potable water supply, the San Francisco Hetch Hetchy Regional Water System. Currently, the City is consuming 1,000 acre-feet per year (AF/yr) over the contractual (wholesale) supply assurance limit of 12,243 AF/yr. City staff is projecting that the water supply demand above their allotment will increase up to 2,700 AF/yr or more by 2009/2010, when the Hetch Hetchy supply contract expires. One of the ways to rebalance this discrepancy is to supplement it with recycled water for non-potable uses.

The South Bayside System Authority (SBSA) operates a publicly owned wastewater treatment works within the Redwood Shores area. SBSA is a joint powers authority that provides wastewater treatment and disposal for Redwood City and other cities on the San Francisco peninsula.

Striking a Balance

As with most large scale projects or concepts there are many entities that have a stake in shaping the components and eventual outcome of a project. All aspects need to be considered. Recognizing that social, economic, historical, environmental, political, and institutional layers all makeup the fabric of the project is the first step to understanding the concept and needs of the people and the project. Policy makers need to make their thoughts clear so that managers can implement the policy which is then relayed to the end users.

The Redwood City Recycled Water Project went through many cycles and reiterations in an attempt to meet its water demand and supply goals and needs. The Redwood City Council subsequently agreed to create a Community Task Force on Recycled Water with the following charter purposes:

- To find 2,000 acre feet per year of recycled water and/or additional conservation of water (beyond that which has been identified) by 2010, in a financially feasible manner by identifying sites alternative to schools and playgrounds.
- To find alternative phasing which is financially feasible to allow the Council to postpone or avoid using recycled water at schools and playgrounds.

The Task Force completed their work in early 2004 and unanimously recommended a new alternative to the City Council, titled "Alternative TF", which delivers 1687 af/yr of recycled water while implementing additional conservation measures and utilizing existing groundwater supply to close the potable water supply deficit. In March of 2004 the City Council approved the Task Force report.

The City of Redwood City is embarking on the California Urban Water Conservation Council (CUWCC) Best Management Practice BMP05 Program for Large Landscape Conservation Programs and Incentives. The results of the work being performed under that program are available to the recycled water project. The recycled water team is able to identify and recognize good stewards of the potable water for irrigation usage.

Balancing the Work

Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information on it.

Samuel Johnson, quoted in Boswell's Life of Johnson
English author, critic, & lexicographer (1709 - 1784)

As noted earlier, there are many pieces to the project puzzle. Not only is there a need to manage the water demand, which after all is the reason for the project, but there is the necessity to manage the planning and implementation of the work, with all of the associated mental, physical, environmental and cultural demands associated with this type of endeavor.

In an attempt to manage and control the project, and to keep all of the aspects of the work open and available for the project team members, a web based portal has been developed. An information Portal is a web-based tool, similar to a website. The portal maximizes effective information sharing, work development, and decision making for work in process. It also serves as a document repository and can evolve into design, construction and operation functions using the databases and mapping. The portal has secured access to defined users and is not intended as a public website; however, selected portal content is often shared with public information efforts. The navigation of the portal is very similar to a web site (point and click with a mouse) and content can be posted to the portal in a controlled fashion that keeps the responsibility for information integrity/quality closest to the owning individual.

One of the reasons for combining these aspects comes from the necessity to be able to determine what the status of the retrofit is for any given site or group of sites at a glance. A request may come to you, from either a work colleague, or member of the public, for information related to the status of a design or the outcome of a site visit with a customer. The goal is to be able to present this information as quickly and accurately as possible, and if appropriate, to determine the best course of action.

The database is set up such that all of the parameters needed to perform a successful recycled water retrofit are included in a manner that flows along the lines of the project evolution, from initial contact to final site close-out. In broad terms they can be broken down into the following categories:

- Recycled water use site information - Customer Number, Site Use Name, Address, Land Use Details
- Use site contact information - Property Owner, Property Manager, Landscape Contractor
- 1st stage customer outreach - Point of Contact, Letters of Intent, Agreements
- Design - Lateral coordination, data gathering, preliminary design, final design, reviews and approvals
- 2nd stage customer outreach- Finalizing and execute Agreements
- Training – Site Supervisors
- Bidding – Details related to the construction bidding process
- Construction Management – of the construction work from the initial submittal review through construction and cross-connection testing to final completion

The search capabilities of the database make it easy to navigate through the system. The site record type can then be further broken down into tabs to store historical data and other details such as links to aerial photographs, site photographs, and copies of site retrofit plans.

Throughout the lifetime of the project on any given day there are many interactions encountered, decisions expressed, visits organized, questions raised, and progress made. By inputting the required information into the database and following the step by step processes, any one of the team members are able to monitor the development of the project. Whether they are viewing it from a customer outreach perspective, a design review perspective, or simply to find out which sites are currently using recycled water, the information is made available to them.

From a construction management perspective, any and all of these scenarios can and does happen in a short amount of time. Having remote access to the portal and database in order to input information or to retrieve an answer is essential.

This portal is a central collection point for multiple databases, market assessments, reports, and documents. Within the project database, an attempt has been made to eliminate duplicate information and waste; that is, information that is not needed or not useful for the day to day running of the project. The fields on the database have been designed such that it is able to automatically format and filter information and distribute to the people who really need it, when they need it.

The complexity of customer retrofit work is highly variable and the effort level and associated cost is based on a number of assumptions regarding the availability of existing information on customer sites, level of fieldwork required to document existing conditions, complexity of the existing potable water service configuration, review requirements of local and state Health Services, and ability and/or willingness of the customer to coordinate with the City and consulting team.

What's in the Pipeline?

The future is here. It's just not widely distributed yet.

William Gibson
Novelist (1948 -)

All of the features of the portal and database will be implemented throughout the design and construction of customer site retrofits located within the eastern portion of the City, defined as Phase One of the Recycled Water Project.

The customers for the Project are all located on the east side of Bayshore Highway 101 in the Redwood Shores, Bay Front, and Seaport Industrial areas. The only classifications that are eligible under this project include Industrial, Commercial Landscape/Mixed Use, City-Owned Landscapes, Residential/Homeowner Association (HOA) Landscapes, and CalTrans Landscape types.

Currently there are 93 individual customer sites have been identified as eligible to use recycled water for landscape irrigation and/or industrial uses, of which 57 are included in the initial portion of the project.

The common thread throughout the whole project is a culture of balance, from the recognition of the imminent potable supply and demand dilemma, to the phased choice of the eligible customers and beyond to the design of the 50 year facilities.

How Do We All Win?

A successful strategy exists in tying in landscape water conservation with the customer retrofit process to positively reinforce overall responsible water supply management. Helping site managers and landscape maintenance crews to understand your region's water supply issues and how what they do at their site can impact community goals. By demonstrating effective approaches toward assimilating site characteristics, irrigation facilities, and site management into a full retrofit and water management program site, managers and landscape managers can buy into best management practices and your goals for improved water use. Recycled water becomes one more element in the total water management plan site managers should be considering.

Surrounding residents and businesses will also appreciate the focus on water conservation being implemented hand-in-hand with recycled water use. Communities often feel that every effort should be exhausted to improve water conservation practices *before* recycled water projects are implemented. There can be a huge perceived win for the community by expressing that water conservation and recycled water are an effective combination toward addressing local and regional water supply concerns.

Public Perception Matters

My works are like water. The works of the great masters are like wine. But everyone drinks water.

Samuel Longhorne Clemens from the Wit & Wisdom of Mark Twain
Author and great American lecturer (1835-1910)

Since controversy can surround recycled water projects, it is important to act proactively to a variety of potentially explosive issues. Fears regarding cross connection and the quality of the treated recycled water are common and genuine concerns. Effectively responding to such concerns is vital in your communications with new retrofit customers as well as gaining public acceptance in your community. Developing trust in a project takes time and you cannot rely on minimal outreach requirements for noticing. You will likely need more consensus building activities for community buy in. Plus you may have to listen and be responsive as recycled water can carry a charge with it, not only because of health and safety concerns, but because many citizens have become cynical and distrustful of government programs.

Retrofits occur as each property owner agrees to convert to recycled water for landscape irrigation and industrial use. To successfully manage the work, provide accurate reporting, and ensure safety, each customer retrofit site or group of retrofits should be treated as an individual project. They should also be viewed as an opportunity to communicate with the property owner and occupants, a "touch point" to connect with resident or business interests in the community. The manner in which this interaction occurs can set the tone for success or failure of your retrofit program.

Use of new technologies, such as websites, permission based e-mail broadcasts, and intelligent databases can enhance communication with citizens and stakeholders allowing you to capitalize on "touch points," making your team more responsive to the community and stakeholders.

Here are a few mediums that are essential and have come to be expected in many communities today:

- **Permission Based E-mail Broadcasts:** Keeps those who have expressed an interest consistently in the loop. You can have a variety of broadcast groups to meet various communication needs.

- **Project Website:** Post background information, schedules, maps, key documents and public meeting dates.
- **Project Call Center:** This could be as simple as a specific telephone number that everyone knows as the resource number that can be called day or night to ask project questions, or alert you to problems in the field.
- **Neighborhood & Policy Meetings:** Be sure to aggressively notice meetings where policymakers are discussing and making key decisions. Informal one-on-one meetings, small group meetings in neighborhoods, and key stakeholders discussions, can also be highly productive and promote good will.
- **Printed Materials:** You will need standard outreach materials such as backgrounders, maps, brochures and have project documents readily available.

Most Important Component: Develop a Smart Database

Besides having in depth retro fit data at your finger tips in your project database you will also want to maintain a history (or record) of each individual's interaction with your project. Whether they are a stakeholder, home owner, an effective business and angry opponent - you can note meetings attended, documents sent, and records of telephone and e-mail dialogue. More importantly, it ensures that the right people received the right information at the right time throughout the project, and you have a record of it.

Starting with your current mailing list, the database might have various segments depicted based on interest or impact, such as agriculture, traffic, utilities, technology, tourism, and business. Unique outreach messages could then be sent to these segments, as various topics need to be addressed.

Additional interests are easily added. Sorting by category, geographic areas, level of interests, and alphabetically now becomes possible. Such a database can also note preferences on how each individual prefers to receive information, either by mail, email, fax, or phone. Studies have shown an increase in response to messages sent through a person's preferred channel of communicating.

The best feature is the capability to share this information across a network with your project team and essential agencies. Such access allows full use of the data for a myriad of uses as referenced above, including, and probably the most important; remembering promises made so commitments can be retained through the life of large-scale projects that can take years to build.

Key Benefits of Using a Project Database and Portal for Your Project?

Recycled water retrofits can be implemented in a property-friendly manner and with community support. With some thoughtful public involvement practices and a little bit of technology, all participants and those potentially affected can appreciate and enjoy the benefits.

You can fine-tune the process of implementing retrofits with databases that can be shared across networks and the internet; public officials, project staff, and regulating agencies can be kept informed of field work – in real time. These databases provide quick access for necessary contact information, while providing complete records of site work, communications, and status information. In this environment, regulators can be assured work is being performed in full compliance; staff has easy access to issues while they are evolving, and officials know the status of communications with residents and businesses in their community.

In summary, using a database ensures that:

- Regulators are assured that work is being performed in full compliance;
- Staff has easy access to issues while they are evolving;
- Public officials know the status;
- Residents and businesses feel responded to;
- Your project team has help remembering and keeping promises made to customers and the community.