Rancho Murieta Community Services District
Technology Implementation Plan

November, 2005

Executive Summary

- Introduction
  - This Plan supports the CSD Technology Master Plan presented in April, 2005
  - The projects addressed in this plan:
    - Computerized Maintenance Management System (CMMS)
    - Wireless network
    - Graphical Information System (GIS)
    - ABDI security package in the field
    - Supervisory Control & Data Acquisition (SCADA)

Executive Summary

- Priorities & Funding
  - Fees acquired as a result of growth will fund these projects
  - Growth could double the number of homes & add commercial properties
  - Growth is not guaranteed; these projects must be evaluated accordingly
  - Projects are presented individually & combined
  - Those with the greatest impact and least risk have highest priority & will be initiated first

Executive Summary

- Cost Benefit & Payback
  - Assumptions
    - Community expansion will create additional demands for labor, equipment, & maintenance
    - Proposed projects will allow CSD to meet need with technology, minimizing staff additions
    - CMMS will allow more preventive maintenance & less corrective and emergency maintenance
    - Wireless network will reduce Office time for Patrol Officers, creating greater security

Executive Summary

- Cost Benefit & Payback
  - Assumptions, cont.
    - Benefits from wireless network are derived from the software applications that use it (CMMS, GIS, ABDI, SCADA)
    - GIS will reduce maintenance costs because work such as digging for buried pipe or conduit will be more precise

Executive Summary

- Cost Benefit & Payback

Priority	Project	Payback Period	Payback Date as Proposed	ROI, 2014
1	CMMS	6 Years	2012	269%
2	Wireless Network	8 Years	2014	108%
3	GIS	8 Years	2014	101%
4	ABDI in the Field	N/A*	N/A	N/A
5	SCADA	12 Years	2021	-9%
6	ALL w/SCADA	12 Years	2016	77%
7	All w/o SCADA	9 years	2013	159%

*Benefits included in wireless network calculations

Executive Summary

- Proposed Schedule & Critical Path

Projects	Start	Complete
CMMS	1/16/2006	1/17/2007
Wireless Network	11/28/2005	8/21/2006
GIS	11/17/2006	5/12/2008
ABDI in the Field	8/22/2006	10/02/2006
SCADA	10/02/2008	12/23/2009

Executive Summary

- Proposed Schedule & Critical Path (Resources)

Resources	Complete
Hire CMMS RFP Consultant	**1/27/06**
Hire Project Manager Consultant	**7/13/2006**
Bring in GIS Analyst Contractor	**9/19/2006**
Networked SQL Server	**11/01/2005**

Scope

- These Projects from the Technology Master Plan are not addressed here:
  - Automated Service Order/Customer Service Application
  - Web-based Bill-Pay capability
  - Enhanced database management & reporting
  - Employee Intranet

Implementation Strategy

- Each project will have its own project team & schedule
- Interdependencies must be accounted for
- All projects report to the Leadership Team
- Project Manager will coordinate and have a leadership role in all projects
- The schedule will be subject to ongoing review

Implementation Strategy

- If projects are delayed, impacts to other projects must be identified
- Projects will be run is such a way that CSD staff are not overwhelmed

Leadership Team

- Ed Crouse
- Greg Hall
- Communication & Technology Committee
- Project Manager

Implementation Goals

- The Technology Master Plan identified these Strategic Goals:
  - Minimize paper processes & files by replacing them w/automated processes & electronic storage
  - Maximize employee productivity through Information Technology
  - Enhance customer service by improving District accessibility

Implementation Goals

- This Implementation Plan has these goals:
  1. Achieve the Technology Strategic Goals through well managed projects that are conducted:
     - So as to not overtax CSD staff
     - Without interruption to CSD services
     - Within budget & schedule

Implementation Goals

2. Complete the installation of technical solutions so that they reinforce the core values of the CSD:
   - Provide the best customer service possible
   - Maintain stable rates to customers
   - Seek continuous improvement in productivity & the quality of service

CMMS Project

- Team & Estimated Time Requirements

Team Member	Role	%	05	06	07	08	09	Total Hours
Joe Majarucon	Lead	25%	340	21				361
Steve Twitchell	Waste Treatment	10%	170	10				180
Rob (Mac) McLeod	Utility	10%	170	10				180
Wes White	Mechanic	10%	170	10				180
Greg Hall	Admin/IT	3%	51	3				54
Ed Crouse	Oversight	2%	34	2				36
		Total	935	56				991

CMMS Project

- Schedule

Task	Start	Complete
Choose CMMS Vendor	**1/16/06**	**4/25/06**
Implement	**7/04/06**	**1/17/07**

CMMS Project

- Interdependencies Among Projects

Dependency	Interdependent Project
Predecessor	
Contract for RFP Assistance	**Management**
Infrastructure **Server** **SQL Server database**	 **Management** **Management**
Input from Other Projects	
Network Site Survey & performance/security info	**Wireless Project**
Output to Other Projects	
CMMS network traffic & bandwidth requirements	**Wireless Project**
If GIS interface, GIS requirements	**GIS Project**

CMMS Project

- Project Implementation Costs

	05	06	07	08	09	Total
CMMS Licenses		**$42-$82,000**				**$82,000**
Server		**$8,000**				**$8,000**
Installation & Training		**$15,000**				**$15,000**
Mobile Devices **Vehicle Mounts**		**$36,000** **$5,000**				**$41,000**
Acquisition & Startup		**$60,000**				**$60,000**
Total		**$206,000**				**$206,000**

CMMS Project

- Benefits
  - More preventive maintenance, thereby, reducing costs incurred by:
    - Equipment failure
    - Equipment downtime
    - Unplanned corrective maintenance
    - Overtime maintenance
  - Equipment life is extended by routine preventive maintenance

CMMS Project

- Benefits
  - More work is planned & scheduled allowing for more efficient use of staff
  - CMMS is a repository for maintenance information & so less time is spent looking for information
  - Service history is maintained on equipment so that analysis con be done to make informed decisions

Wireless Network Project

- Team & Estimated Time Requirements

Team Member	Role	%	05	06	07	08	09	Total Hours
Greg Hall	Lead	12%	18	137				155
Joe Majarucon	Field Operations	10%	12	92				104
Greg Remson	Security	10%	12	92				104
Ed Crouse	Oversight	10%	7	57				64
		Total	49	378				427

Wireless Network Project

- Schedule

Task	Start	Complete
Site Survey	**11/28/05**	**1/27/06**
Select Vendor	**1/09/06**	**4/17/06**
Implementation	**4/18/06**	**8/21/06**

Wireless Network Project

- Project Implementation Costs

	05	06	07	08	09	Total
Site Survey	**$25,000**					
Hardware **Access Points (20-30)** **Mesh Network** **Servers**		**$60,000** **$10,000** **$30,000**				**$100,000**
Integration & deployment Costs			**$50,000**	**$50,000**		**$100,000**
Acquisition & Startup		**$60,000**				**$60,000**
Total	**$25,000**	**$160,000**	**$50,000**	**$50,000**		**$285,000**

Wireless Network Project

- Benefits
  - The combination of CMMS & wireless network will allow maintenance workers access to CMMS work orders and email in the field, reducing office and travel time
  - Security Patrol Officers can access the ABDI application in their vehicle, increasing patrol time & the presence of security in the community without additional officers
  - Faster access to data by Patrol Officers provides additional safety to the officer & residents & allows them to be more responsive to the community

Wireless Network Project

- Benefits
  - Email could be available to staff anywhere in the community to quickly communicate with the office, co-workers or residents
  - The internet would be available to the staff in the field allowing them to research problems at the job site

Remaining Projects

- Schedule

Project	Start	Complete
GIS	**11/17/06**	**1/7/08**
ABDI in the Field	**8/22/06**	**10/02/06**
SCADA	**10/02/08**	**12/23/09**

Combined Projects

- Team & Estimated Time Requirements

Team Member	Role	05	06	07	08	09	Total Hours
Ed Crouse	Oversight	7	106	38	16	18	185
Greg Hall	Admin & IT	18	262	269	98	36	683
Joe Majarucon	Field Ops	12	483	199	148	355	1197
Steve Twitchell	Waste Treat		221	188	103	178	690
Rob McLeod	Utility		221	188	103	178	690
Greg Remson	Security	17	197	185	67		466
Wes White	Mechanic		170	10	44	178	402
Security Staff	Security		48				48
	Total	54	1708	1077	579	943	4361

Combined Projects

- Project Implementation Costs

	05	06	07	08	09	Total
CMMS		**$206,000**				**$206,000**
Wireless Network	**$25,000**	**$160,000**	**$50,000**	**$50,000**		**$285,000**
GIS		**$16,850**	**$130,000**			**$146,850**
SCADA				**$350,000**	**$250,000**	**$600,000**
Total	**$25,000**	**$382,850**	**$180,000**	**$400,000**	**$250,000**	**$1,237,850**

Conclusion

- This implementation plan presents a coordinated and informed process for the District to proceed towards goals defined in the CSD Technology Master Plan
- It provides information on costs, benefits, and payback so that decisions can be made to proceed or to postpone all or individual technology projects
- Information is available to keep technology projects on track and coordinated

Questions?