

CALIFORNIA
Secretary of State
DEBRA BOWEN



**Special Project Report for
State of California**

Provided by Secretary of State

VoteCal Project

June 23, 2009

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Information Technology Project Request

Special Project Report
Executive Approval Transmittal



Department Name

California Secretary of State

Project Title (maximum of 75 characters)	Project Acronym
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VoteCal Statewide Voter Registration Database System	VoteCal
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FSR Project ID	FSR Approval Date	Department Priority	Agency Priority
0890-46	April 14, 2006	1	1

APPROVAL SIGNATURES

I am submitting the attached Special Project Report (SPR) in support of our request for the Department of Finance's approval to continue development and implementation of this project.

I certify that the SPR was prepared in accordance with the State Administrative Manual Sections 4945-4945.2 and that the proposed project changes are consistent with our information management strategy as expressed in our current Agency Information Management Strategy (AIMS).

I have reviewed and agree with the information in the attached SPR.

Chief Information Officer		Date Signed
		June 18, 2009
Printed name:	Mary Winkley	
Manager of Fiscal Affairs		Date Signed
		6/18/2009
Printed name:	Linda Arvise Hunt	
Assistant Secretary of State, Operations and Project Sponsor		Date Signed
		6/18/2009
Printed name:	Janice Lumsden	
Chief Deputy Secretary of State		Date Signed
		6-22-09
Printed name:	Evan Goldberg	

INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION A: EXECUTIVE SUMMARY

1.	Submittal Date	June 23, 2009
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2.	Type of Document	FSR	SPR	PSP Only	Other:
	Project Number	0890-46			

3.	Project Title	VoteCal Statewide Voter Registration System Project	Estimated Project Dates	
	Project Acronym	VoteCal	Start	End
			08/03/06	12/20/12

4.	Submitting Department	Secretary of State
5.	Reporting Agency	

6.	Project Objectives
	<p>Program objectives for the VoteCal Project include:</p> <ul style="list-style-type: none"> - Comply with 100% of the Help America Vote Act (HAVA) voter registration system requirements

8.	Major Milestones	Est. Complete Date
	Requirements and RFP Development	12/13/07
	Vendor Selection and Project Planning	10/01/09
	Project Planning and Scoping	7/11/11
	System Deployment and Training	1/13/12
	PIER	1/13/13
	Key Deliverables	
	RFP	12/13/07
	SPR and Vendor Contract	10/01/09
	Fit Gap Analysis, SRS, SDD, Interfaces, Test Results, HAVA-Compliant Database	4/21/11
	End User and Technical Training	7/11/11
	VoteCal Acceptance	12/23/11

INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION A: EXECUTIVE SUMMARY

7.	<p>Proposed Solution</p> <p>Section 303 of the Help America Vote Act (HAVA) of 2002 (Public Law 107-22, 107th Congress) mandates that each state implement a uniform, centralized, interactive, computerized voter registration database that is defined, maintained, and administered at the state level. This database must contain the name and registration information of every legally registered active or inactive voter in the state. This system constitutes the official record of all registered voters. Unlike the state's current system, the state database must serve as the single system for storing and managing the official list of registered voters in the state.</p> <p>This system must provide a functional interface for county elections officials, who are charged with the actual conduct of elections, to access and update the registration data. Additionally, HAVA mandates the voter registration database system coordinate electronically with the Department of Motor Vehicles (DMV), the California Department of Public Health (CDPH), the Employment Development Department (EDD), and the California Department of Corrections and Rehabilitation (CDCR) for voter identification and list maintenance purposes.</p> <p>The major factors driving the selected HAVA compliance solution were the specific compliance requirements, as understood by the State of California, and the need to minimize disruption to county elections offices business processes. In particular, the requirements for a uniform and centralized database to serve as the official list preclude solutions where information in county systems is simply exported to a central database subsequent to data entry, because this solution would require a significant disruption of county business processes to replace existing county systems.</p> <p>The proposed solution addresses both of these major requirements by providing a new central state database (VoteCal) and remediating existing county election management systems (EMSs) to serve as the "front end" for maintaining voter registration information in the central system. The solution will permit county users to use their existing (remediated) data entry screen processes while ensuring that voter registration information is maintained in the VoteCal database.</p>
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**INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION B: PROJECT CONTACTS**

Project #	0890-46
Doc. Type	SPR

Executive Contacts								
	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
Chief Deputy Secretary of State	Evan	Goldberg	916	653-7244		916	651-8295	Evan.goldberg@sos.ca.gov
Division Chief for Elections	Cathy	Mitchell	916	653-0721		916	653-3214	Cathy.mitchell@sos.ca.gov
Manager – Fiscal Affairs	Linda	Arviso Hunt	916	653-9445		916	653-8544	Linda.hunt@sos.ca.gov
Chief Information Officer	Mary	Winkley	916	654-8365		916	651-8295	Mary.winkley@sos.ca.gov
Project Sponsor	Janice	Lumsden	916	653-2328		916	653-4795	Janice.lumsden@sos.ca.gov

Direct Contacts								
	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
Doc. prepared by	Jeff	Scheel	916	351-8389		916	985-3991	jeff.scheel@rg-associates.com
Primary contact	Mary	Winkley	916	654-8365		916	651-8295	Mary.winkley@sos.ca.gov
Project Manager	TBD							

INFORMATION TECHNOLOGY PROJECT SUMMARY
SECTION C: PROJECT RELEVANCE TO STATE AND/OR DEPARTMENTAL PLANS

1.	What is the date of your current Operational Recovery Plan (ORP)?	Date	10/2007
2.	What is the date of your current Agency Information Management Strategy (AIMS)?	Date	05/17/2004
3.	For the proposed project, provide the page reference in your current AIMS and/or strategic business plan.	Doc.	AIMS
		Page #	2

Project #	0890-46
Doc. Type	SPR

4.	Is the project reportable to control agencies?	Yes	No
		X	
	If YES, CHECK all that apply:		
	X	a) The project involves a budget action.	
	X	b) A new system development or acquisition that is specifically required by legislative mandate or is subject to special legislative review as specified in budget control language or other legislation.	
	X	c) The estimated total development and acquisition cost exceeds the departmental cost threshold and the project does not meet the criteria of a desktop and mobile computing commodity expenditure (see SAM 4989 – 4989.3).	
		d) The project meets a condition previously imposed by Finance.	

**INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION D: BUDGET INFORMATION**

Project #	0890-46
Doc. Type	SPR

Budget Augmentation Required?										
No										
Yes	X	If YES, indicate fiscal year(s) and associated amount:								
		FY	09/10	FY	10/11	FY	11/12	FY	12/13	FY
		\$ 5,976,849		\$ 22,717,419		\$ 13,291,778		\$ 4,302,136		

PROJECT COSTS

1.	Fiscal Year	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	TOTAL
2.	One-Time Cost	\$ 380,562	\$ 1,190,085	\$ 1,348,944	\$ 5,140,410	\$21,304,187	\$11,878,546	\$ 0	\$41,242,734
3.	Continuing Costs	\$	\$	\$	\$ 1,315,187	\$ 1,891,980	\$ 1,891,980	\$ 4,780,884	\$ 9,880,031
4.	TOTAL PROJECT BUDGET	\$ 380,562	\$ 1,190,085	\$ 1,348,944	\$ 6,455,597	\$23,196,167	\$13,770,526	\$ 4,780,884	\$51,122,765

SOURCES OF FUNDING

5.	General Fund								\$
6.	Redirection								\$
7.	Reimbursements								\$
8.	Federal Funds	\$ 380,562	\$ 1,190,085	\$ 1,348,944	\$ 6,455,597	\$23,196,167	\$13,770,526	\$ 4,780,884	\$51,122,765
9.	Special Funds								\$
10.	Grant Funds								\$
11.	Other Funds								\$
12.	PROJECT BUDGET	\$ 380,562	\$ 1,190,085	\$ 1,348,944	\$ 6,455,597	\$23,196,167	\$13,770,526	\$ 4,780,884	\$51,122,765

PROJECT FINANCIAL BENEFITS

13.	Cost Savings/Avoidances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
14.	Revenue Increase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION E: VENDOR PROJECT BUDGET**

Vendor Cost for FSR Development (if applicable)	\$ 174,295
Vendor Name	Gartner Consulting

Project #	0890-46
Doc. Type	SPR

VENDOR PROJECT BUDGET

1.	Fiscal Year	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	TOTAL
2.	Primary Vendor Budget				\$1,701,367	\$9,668,346	\$6,807,287		\$18,177,000
3.	Project Management Budget	\$ 172,040	\$ 305,880	\$307,280	\$ 320,640	\$ 320,640	\$ 320,641		\$ 1,747,121
4.	Independent Oversight Budget	\$ 108,806	\$ 224,624	\$193,639	\$ 281,350	\$ 319,358	\$ 220,081		\$ 1,347,858
5.	IV&V Budget	\$ 15,626	\$ 118,379	\$104,496	\$ 431,414	\$ 383,155	\$ 100,014		\$ 1,153,084
6.	Other Budget	\$ 16,200	\$ 302,015	\$315,650	\$ 690,568	\$7,066,400	\$ 358,200		\$ 8,749,033
7.	TOTAL VENDOR BUDGET	\$ 312,672	\$ 950,898	\$921,065	\$3,425,339	\$17,757,899	\$7,806,223		\$31,174,096

------(Applies to SPR only)-----

PRIMARY VENDOR HISTORY SPECIFIC TO THIS PROJECT

7.	Primary Vendor	Catalyst Consulting Group
8.	Contract Start Date	October 1, 2009¹
9.	Contract End Date (projected)	December 27, 2017²
10.	Amount	\$ 22,951,100³

1 - assumes SPR approved by August 30, 2009

2 - assumes execution of 5-year software maintenance contract

3 - assumes execution of 5-year software maintenance contract & one year hardware maintenance contract

PRIMARY VENDOR CONTACTS

	Vendor	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
11.	Catalyst Consulting	Scott	Hilker	312	499-2212	-	312	629-0751	Scott.hilker@catconsult.com
12.									
13.									

INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION F: RISK ASSESSMENT INFORMATION

Project #	0890-46
Doc. Type	SPR

RISK ASSESSMENT

	Yes	No
Has a Risk Management Plan been developed for this project?	X	

General Comment(s)
<p>The VoteCal Project will employ a systematic approach to risk identification, management, escalation, and closure. This document describes the risk management and escalation processes for the VoteCal Project. The purpose of the process is to ensure:</p> <ul style="list-style-type: none"> • Risks are defined and properly scoped. • The correct participants are involved in the risk analysis and mitigation process. • Root causes are analyzed and recommendations are based on sound judgment. • Specific persons are named to complete action items. • Actions are tracked to resolution/completion. • Escalation to a higher level of management is available and is pursued when mitigation or intervention cannot be achieved at the project level. • Risks and associated actions and their status are formally documented and regularly reviewed. • Communication among project stakeholders is appropriate and timely in order to facilitate an understanding of risk impact, develop quality responses, and minimize the disruption associated with rumor and misinformation. <p>Risk management is an ongoing process, from the inception to the closure of the project, and it is a critical component of project monitoring and control activities.</p>

3.0 PROPOSED PROJECT CHANGE

3.1 Project Background¹

The program to be supported by the VoteCal Statewide Voter Registration Database System (VoteCal) Project is the registration of voters, administered jointly by the Secretary of State (SOS) Elections Division and county elections officials. The Elections Division's primary mandate is to ensure that state and federal elections laws are fairly and uniformly administered, that every eligible voter can participate in the electoral process, and that the process remains open and free from fraud. California's voter registration program is fundamental to that effort. Maintaining accurate records of all legally registered voters is critical to ensuring the integrity of all elections conducted in this state. To fulfill the purposes of the voter registration program, the state distributes voter registration cards through many channels, including local advocacy groups, other state and local agencies, and provides online access to registration materials. To fulfill the purposes of the voter registration program, the county elections officials are responsible for:

- Processing voter registration cards
- Verifying voter eligibility
- Notifying voters of their voter registration status
- Updating voter registration records with data received from multiple sources, including returned voter registration cards, direct communication from registrants, and electronic data received from other agencies

The information collected and maintained through the voter registration process is used to conduct a wide range of election management activities, including:

- Determining precinct boundaries
- Establishing polling places
- Verifying petition signatures
- Mailing election information to registered voters
- Providing voter information to courts for jury pools
- Qualifying candidates for the ballot

Currently, while Calvoter I constitutes the official voter file for federal elections as a matter of law and regulation, it is an amalgamation of data maintained by the county elections officials of each of the 58 counties. The SOS maintains a statewide database of all active and inactive voters in the Calvoter I statewide voter registration database. Calvoter I aids county elections officials in their voter registration list maintenance activities by identifying duplicate, changed and invalid registrations and sending that notification to county elections officials' staff to address as appropriate. Calvoter I contains a mirror image of the county voter records, kept current by daily updates from county elections staff. New voter records cannot be entered directly into Calvoter I, they must be entered into the county's election management system (EMS), which then sends the new information to Calvoter I on a nightly basis. The nightly batch processing is the method by which additions, changes, and deletions of voter information are entered into Calvoter I.

¹ The project background information as documented in the original approved VoteCal Feasibility Study Report has not changed and is included here for reference.

Calvoter II is a separate, free-standing system that processes candidate filings and compiles election results. Calvoter II captures information on candidates (e.g., name, office), tracks candidate qualification (e.g., fees paid, petition signatures gathered, documentation filings) and election results (e.g., vote totals in aggregate and by various political districts). Calvoter II will remain in place when VoteCal is deployed as its functionality is different from VoteCal.

Section 303 of the Help America Vote Act (HAVA) of 2002 (Public Law 107-22, 107th Congress) mandates that each state implement a uniform, centralized, interactive, computerized voter registration database that is defined, maintained, and administered at the state level. This database must contain the name and registration information of every legally registered active or inactive voter in the state. This system constitutes the official record of all registered voters. The state database must serve as the single system for storing and managing the official list of registered voters in the state.

This system must provide a functional interface for county elections officials, who are charged with the actual conduct of elections, to access and update the registration data. Additionally, HAVA mandates the voter registration database system coordinate electronically with the Department of Motor Vehicles (DMV), the California Department of Public Health (CDPH), the Employment Development Department (EDD), and the California Department of Corrections and Rehabilitation (CDCR) for voter identification and list maintenance purposes.

3.2 Project Status

3.2.1 VoteCal Business-based Procurement

The VoteCal Feasibility Study Report (FSR), approved April 14, 2006, authorized the SOS to conduct a competitive, business-based procurement that identified a System Integrator (SI) vendor to develop and implement a single, centralized voter registration database that meets HAVA requirements.

The project has completed the procurement phase; the SOS VoteCal Project Team identified an SI vendor and accomplished the following:

- Created and distributed the Request for Proposal (RFP) for the project
- Received and reviewed multiple draft proposals from the bidders
- Held multiple confidential discussions with the bidders
- Issued eight addenda to the RFP
- Prepared four question-and-answer sets for bidders
- Received and reviewed final proposals, including cost proposals
- Selected the recommended vendor
- Completed and received Department of General Services (DGS) approval on the Evaluation and Selection Report

Catalyst Consulting Group, Inc., Quest Information Systems, Inc., and Saber Government Solutions submitted final proposals. A summary of the evaluation is as follows:

Catalyst Consulting Group

The final Catalyst Consulting Group proposal met all the pass/fail requirements and had an evaluated score that exceeded the 7,000-point threshold.

Quest Information Systems, Inc.

As detailed in Section IX - Evaluation and Selection of the RFP, all VoteCal technical requirements are mandatory. The Evaluation Team assessed the bidder's responses to the technical requirements in Section VI of the RFP to determine whether the bidder fully addressed each requirement. Additionally, the team evaluated pass/fail aspects of the proposed Project Team (RFP Section IX, Table IX.18, page IX-36). By consensus, the Evaluation Team determined the proposal submitted by Quest Information Systems, Inc., failed 40 of the technical requirements as well as pass/fail aspects of requirements P18 and P19. Based on this, the proposal was found non-responsive and was excluded from further evaluation.

Quest Information Systems, Inc. did not participate in any of the confidential discussions or draft submission processes.

Saber Government Solutions

During review of the bidder's responses to the VoteCal business requirements (known as "S" requirements), the team discovered the bidder had failed to respond to Requirements S1.3.1 and S4.15.1 that were added to the RFP in Addendum 6 dated September 5, 2008. At this point, the evaluation team reviewed each business requirement that was added, deleted or modified after Addendum 5 to determine whether the changes to the requirement in subsequent addenda were substantive (i.e., a modification of the original scope or functionality of the requirement) or non-substantive (e.g., spelling corrections, grammar corrections, or minor clarifications of intent). Of the business requirements with substantive changes, the team carefully reviewed the bidder's response, if any, to the requirement as it appeared in the Addendum 8 (final) version of the RFP. The evaluation team identified eight requirements for which the bidder's response failed to address the requirement in its final form to such a degree that they deemed the response a material deviation. The team did not review (1) the business requirements that were unchanged after Addendum 5, (2) the business requirements for which the changes to the requirement in subsequent Addenda were deemed non-substantive, or (3) any of the other components of the bidder's proposal that were scored to determine whether there were further material deviations in the proposal.

Only the Catalyst Consulting Group proposal moved forward to cost opening. Based on the final scores from the evaluation process, the VoteCal Proposal Evaluation Team recommended the contract be awarded to Catalyst Consulting Group. The Catalyst Consulting Group proposal includes the participation of DFM, the EMS vendor for 31 of the county elections offices in California. This will help facilitate the efforts associated with EMS remediation and integration. Catalyst Consulting Group is also partnered with Microsoft, providing a technical architecture that is consistent with the knowledge base and standards of the SOS.

Because the procurement process resulted in only one cost proposal being opened, only a single alternative solution is being evaluated in this Special Project Report (SPR). The alternatives proposed by other vendors will not be used for comparative purposes as a result of not satisfying mandatory requirements.

3.2.2 Interim Solution

As part of the SOS's HAVA compliance effort, an Interim Solution project was undertaken to meet requirements negotiated with the United States Department of Justice (USDOJ) to achieve interim compliance with HAVA requirements and to increase the service level to county elections offices by identifying potential duplicate or ineligible registrants. This included such solutions as retaining death records at the SOS in Calvoter I to help enable county elections offices to identify potential fraudulently registered voters and initiating a means of identification verification.

The long-term benefit of undertaking the Interim Solution effort is that the activities resulted in immediate value and will be used by the VoteCal solution. Most importantly, completing the Interim Solution project demonstrated California's commitment to achieving full compliance with HAVA Section 303 mandates.

3.3 Reason for Proposed Change

Since this is a business-based procurement, the FSR did not identify a solution. Thus, this SPR defines the solution as a result of the procurement phase that identified the solution. During the initial FSR development and project planning and procurement, the VoteCal Project Team used market research and good faith estimates for the preliminary project scope, budget estimates, and schedule. In the course of interaction with the bidders via submitted questions and confidential discussions, the VoteCal Project Team identified numerous updates and changes to the RFP requirements that resulted in eight published addenda. These actions extended the procurement schedule by approximately seven months beyond the dates in the most recently approved SPR.

The selection of the vendor and solution resulted in the identification of final project costs and schedules. It also allowed the VoteCal Project Team to finalize the nature and scope of project activities that need to be completed outside of the work to be done by the selected SI vendor.

This SPR documents the final schedule, budget, solution description, project activities, and resource requirements resulting from the completion of the procurement phase.

3.4 Proposed Project Change

Undertaking a business-based procurement provided a number of benefits to the project. One of the most important was receiving proposals that better met the state's needs by being able to discuss requirements with the vendor community before final proposals were submitted. Additionally, taking the time to visit other states and discuss approaches as well as lessons learned resulted in changes to the project that reduced costs by approximately \$15 million. Although the project has been delayed as a result of a lengthier procurement cycle, the project is more likely to be successful as a result of the information received from other states.

Changes to the proposed project from the last approved SPR are as follows:

- A revised project schedule has been completed with a start date for the SI vendor of no later than October 1, 2009.

- Project costs are finalized to reflect the SI vendor's cost for the recommended solution and other required project activities. Total project costs are approximately \$15 million less than initially projected.
- Project resource requirements have been finalized based on the proposed solution and knowledge gained from Interim Solution activities and discussions with states that have implemented projects that took a similar approach. One of the lessons learned that resulted in a change in approach is that county election office involvement is critical to project success. Thus, HAVA will fund county-based resources as identified in the project plan, a key element for ensuring active participation by the county elections officials and their staffs.
- Specific strategic decisions and impacts have been identified and defined based on the proposed solution. These items include:
 - Contracting directly with EMS vendors for system remediation. Based on lessons learned from discussions with states using a similar approach to the one employed by the VoteCal Project, a decision was made to contract directly with the EMS vendors for remediation activities rather than requiring the SI vendor or county election officials to take this responsibility.
 - Situating the VoteCal primary system at the SOS and backup at the Department of Technology Services (DTS). Due to the mission-critical nature of VoteCal as it relates to the conduct of elections in the State of California, the SOS is proposing an installation that ensures the Agency has the ability to make support and continuity high priorities. To this end, the primary servers will be installed at the SOS site with backup in the DTS Customer-Owned Equipment Managed Service (COEMS) environment. The FSR proposed that the primary site be at DTS' COEMS environment with a backup at a third-party provider.

3.5 Impact of the Proposed Change on the Project

The impacts of the changes discussed in this SPR include:

- Project Schedule: The start date of the SI vendor for the project has been established as no later than October 1, 2009. The vendor's proposed schedule has been reviewed and revised to reflect all project activities and constraints (e.g., election cycles that prevent changes to the network). This final schedule, which is reflected in the Project Management Plan (PMP) and the Economic Analysis Worksheets (EAWs), has been approved by the SI vendor. For comparative purposes, the SI vendor's proposed schedule is reflected in Section 4.5.5, Project Schedule. Final deployment and cutover in the proposed schedule differs from the FSR by approximately two years due in part to four changes in Secretaries of State (which necessitated revalidating the approach) as well as the lengthy procurement process.
- Project Costs: Based on the selected solution, actual one-time and ongoing project costs can be better estimated. These updated costs, which reflect an approximate \$15 million reduction from initial estimates, are reflected in the EAWs.
- Project Resources: Based on the selected solution, actual resource requirements have been determined and are reflected in the EAWs. (No new resources are being requested.) As VoteCal is deployed, a few staff will be redirected for discrete activities (e.g., network deployment).

- Project Strategy: Based on lessons learned from the Interim Solution and knowledge gained during the procurement phase, several strategic changes (noted above) have been made and documented in this SPR.

3.6 Feasible Alternatives Considered

The original FSR considered several alternatives and the recommendation was to conduct a business-based procurement to contract for an SI vendor to provide a total solution, including system architecture, and hardware products and services that best meet the state's specific VoteCal requirements. This recommendation was approved by the California Department of Finance (DOF) in a project approval letter dated April 14, 2006. The procurement phase is complete; the vendor community proposed only one solution (one alternative) that meets the VoteCal mandatory requirements. Thus, although multiple alternatives are expected for comparative purposes, there is only one proposed alternative. To facilitate comparison of the recommended solution and related activities to the previously approved FSR content, the following information was prepared to address each section of the FSR solution description. If there was no change from the previously approved FSR content, that fact is noted.

3.6.1 Recommended Alternative Solution – Catalyst Consulting Group

3.6.1.1 Solution Description

The proposed solution, as defined in the VoteCal FSR and RFP, was designed around a hybrid voter registration approach that addressed both the requirements of a new centralized statewide database (VoteCal) and remediation of existing EMSs to serve as the “front end” for maintaining voter registration information in the central system. This “hybrid bottom-up” approach allows county elections staff to continue to use their existing data entry screen processes while ensuring that voter registration information is maintained in the VoteCal database. Doing so minimizes disruption to the workflow of county elections staff and is intended to increase county elections officials’ support for VoteCal.

The following solution description addresses the three major components of the VoteCal solution:

- VoteCal application
- Remediation of EMSs and migration to compliant EMSs
- Integration of VoteCal and EMSs

VoteCal Application

The SI vendor proposes to provide a single, integrated enterprise application to serve the state's needs. The SI vendor's proposed approach meets all of the VoteCal business and technical needs as defined in the FSR and RFP. The SI vendor recognizes that California business and technical requirements are unique and more comprehensive than those of the HAVA statewide database projects in the other 49 states, because California was able to integrate lessons learned from other states in the VoteCal requirements. The SI vendor therefore recognizes it must commit to a customized solution with newly developed components. Although not a custom coding (“green field”) development project, VoteCal will use existing technology from the SI vendor and DFM Associates as accelerators - or starting points - to provide the customized solution. In addition to the development of a fully

integrated solution, the SI vendor will provide a physical infrastructure that supports enterprise class availability, capacity, and security service levels.

The proposed VoteCal solution will be entirely based on current Microsoft technologies. The application physical tier is divided into classic three-layer architecture: presentation, business logic, and data access. Because of the emphasis on Microsoft technologies, the SI vendor has brought on Microsoft as a partner to provide architectural consulting services for the project. A high-level architecture diagram of the VoteCal solution is included as Appendix A.

The interface layer visible to the general public is kept entirely separate from the interface layer of VoteCal. This interface includes only required functionality to minimize any potential security risks if full functionality were to be used. This interface layer will be enabled on servers that exist in a network demilitarized zone (DMZ) separate from VoteCal.

This website browser interface exists as a single compiled ASP.NET project to serve as the public website browser interface, which includes:

- Public Registration Status Search
- Public On-Line Voter Registration
- Public Polling Place Search
- Public Provisional Ballot Status Search
- Public Vote-by-Mail Ballot Status Search

The VoteCal public web pages will conform to the World Wide Web Consortium (W3C)'s Web Content Accessibility Guidelines 1.0 (WCAG 1.0 "AA" Conformance Level).

Remediation of EMSs and Migration to Compliant EMSs

Existing EMSs will be remediated to ensure they interact directly with VoteCal for all additions and updates to voter registration information. In the event an EMS cannot be remediated, the county election offices using it will migrate to another EMS. Supporting the remediation and migration activities is a critical component to the success of the VoteCal Project. Updates to voter registration information will be keyed into the EMSs using the current screens, but record updates will be applied directly to the VoteCal database. This will create a one-way information flow wherein any addition to, change in, or deletion of voter registration information will be applied first to the VoteCal database. The EMSs will be remediated to ensure that all voter registration information derives from VoteCal, thereby ensuring it is the official voter registration list, as required by HAVA. New fields, code tables, and edit rules will be established to bring county data entry screens into alignment with statewide voter registration data definitions and data edits. New logic will be established in EMSs to deal with exception processing arising from integration and validation errors. The EMS vendors will complete this work based on specifications the SI vendors provide. The SOS will contract directly with the EMS vendors for the completion of remediation work.

Integration of VoteCal and EMSs

The EMS Data Exchange Service subsystem is a key component of the overall VoteCal system that will accomplish all batch transfers of data between the independent EMSs and VoteCal. These batch transfers include vote history, voting districts, affidavit images, and other data. In production, voter records are not sent via batch transfers but are

synchronized live via Extensible Markup Language (XML) web services that are tightly coupled with the new statewide voter registration workflow. The service is designed to be a highly configurable extract, transfer, transform, and load tool for this purpose. Temporary configurations of this subsystem will be used to accomplish and validate data conversion. Other temporary configurations are used to support parallel operation of Calvoter I and VoteCal during pilot and deployment phases. The SI vendor proposal provides a full description of the EMS Data Exchange Service; however, a brief summary of its capabilities includes:

- Part of this subsystem is deployed as a Windows service to be installed on the servers (or dedicated workstations) of EMSs. This service maintains a constant diagnostic connection with VoteCal and is self-patching. A temporary installation will also be made on the Calvoter I database server (or connected workstation) to support parallel operation of Calvoter I and VoteCal during pilot and deployment phases.
- On a scheduled or override basis, this service performs extractions from views or custom queries on EMSs.

3.6.1.2 Hardware

In an effort to make the SI vendor solely accountable for the implementation of the solution, the RFP requires a cost proposal that establishes payments in phases for aspects of the solution, rather than by components. (The purpose is to hold the SI vendor accountable for the entire solution, not just the application.) Therefore, separate hardware payments are not defined for this project.

The SI vendor has standardized the server configurations for all server hardware proposed for VoteCal. Exhibit 3-1 provides a summary of the server hardware and the associated system proposed to be installed on that hardware.

Exhibit 3-1: Proposed Server Hardware and Associated System Installations

Server Model	Specifications	VoteCal System
IBM x3550	2 x Xeon Quad Core 3.0 GHz 8 GB RAM 2 x 73 GB 15K SAS HDD Redundant Power Supply	VoteCal WWW 1 VoteCal WWW 2 VoteCal WWW 1 BU VoteCal WWW 2 BU
IBM x3850 M2	4 x Xeon Six Core 2.66 GHz 24 GB RAM 2 x 73 GB 15K SAS HDD Redundant Power Supply	VoteCal VMware
IBM x3850 M2	2 x Xeon Quad Core 2.66 GHz 64 GB RAM 2 x 73 GB 15K SAS HDD Redundant Power Supply	VoteCal SQL 1 VoteCal SQL 2 VoteCal SQL 3 VoteCal SQL 4 VoteCal SQL 5 VoteCal SQL 6 VoteCal SQL 1 BU VoteCal SQL 2 BU

Server Model	Specifications	VoteCal System
		VoteCal SQL_Para 1 VoteCal SQL_Para 2
IBM HS21 XM	2 x Xeon Quad Core 3.0 GHz 8 GB RAM 2 x 15.8 GB 2.5" Solid State Drive Redundant Power Supply	VoteCal Tools 1 VoteCal Tools 2 VoteCal Tools BU 1 VoteCal Tools BU 2 VoteCal AD VoteCal AD BU VoteCal MSC
IBM HS21 XM	2 x Xeon Quad Core 3.0 GHz 32 GB RAM 2 x 15.8 GB 2.5" Solid State Drive Redundant Power Supply	VoteCal App 1 VoteCal App 2 VoteCal App 3 VoteCal App 4 VoteCal App 1 BU VoteCal App 2 BU VoteCal App_Para 1 VoteCal App_Para 2 VoteCal FTP 1 VoteCal FTP 2 VoteCal FTP 1 BU VoteCal 2Tier_Auth 1 VoteCal 2Tier_Auth 2 VoteCal 2Tier_Auth BU

The SI vendor has proposed an IBM N6070 Storage Area Network (SAN) as the primary storage solution for VoteCal. The IBM N6070, in conjunction with the NetApp Data ONTAP storage management solution, will provide a comprehensive and flexible storage strategy for the SI vendor's solution. A few highlights of the capabilities of the IBM N6070 SAN are:

- Tuning the storage environment to a specific application
- Allowing expansion and manipulation of storage resources quickly and without disruption
- Maintaining availability and productivity during upgrades and reconfigurations
- Creating effortless backup and recovery solutions
- Deploying storage resources easily, quickly, and without disruption

The VoteCal SAN will have roughly 100 terabytes of usable storage allocated to VoteCal, which will meet the long-term needs of the SOS for storage of 30 million voter records (including supporting image files and documents) per the RFP requirements. The IBM N6070 will utilize Redundant Array of Independent Disks (RAID) dual parity for fault tolerance and the reserves for global spares and SAN snapshots. Nearly identical IBM N6070s will be installed at both the primary and secondary data centers so that asynchronous replication of data from the primary site SAN to the secondary site SAN (or the opposite in the event of a disaster) will allow for an extremely robust and capable disaster recovery and business continuity solution. The IBM N6070 uses a Write Anywhere

File Layout (WAFL), which is a file system designed specifically to work in a file server appliance. The primary focus is on the algorithms and data structures that WAFL uses to perform its input/output and to implement snapshots (read-only clones of the active file system). WAFL uses a unique copy-on-write technique to minimize the disk space that snapshots consume.

3.6.1.3 Software

The VoteCal application will exist in a classic three-layer, or n-layer, architecture. (A layer is a reusable portion of code that performs a specific function.) In the .NET environment, each layer is set up as a buildable project or group of projects that represents this specific function. The three layers are:

- **The Data Layer:** The data layer is a separate component set up as a group of two .NET projects for the sole purpose of serving up the data from the database and returning it to the caller. Through this approach, data can be logically reused, meaning that a portion of the application reusing the same query can make a call to one-data layer method, instead of embedding the query multiple times.
- **The Business Layer** – Although the interface layer could connect to the data access layer directly, a more robust architecture serves to concentrate all business logic in a separate business layer. For VoteCal, each major database record type will have a corresponding record class that includes all methods for retrieving, modifying, or acting on that data. Two different interface layer components (such as a web service and a browser interface page) can reuse the same underlying business logic class without the need to duplicate code. Major “engine” blocks also exist here at this level to handle the execution of lengthy parallel tasks such as batch import parsing.
- **The Presentation Layer** – This is the layer of functionality that exists between the outside world and the application. It includes ASP .NET browser interfaces for direct interaction with users as well as application interfaces for integration with outside applications and systems. Although separating business logic out of the interface requires additional development work, it provides for superior structure and maintainability.

In addition, there is a common layer that depicts the application .NET Framework classes and Business Enterprise Blocks that are available across the three main layers.

3.6.1.4 Network

LAN Network Infrastructure

The proposed local area network (LAN) network infrastructure at the primary and secondary data centers is a hybrid 10/100/1000 BaseT Ethernet network with 4-Gigabit (Gb) Fiber Channel connectivity resident within the SAN. All VoteCal servers and network devices connected to the Ethernet network will connect via dual redundant Gigabit (1000 BaseT) Ethernet, and all devices directly connected to the SAN will communicate with it via dual redundant 4-Gb Fiber Channel connectivity configurations. All servers will connect to the LAN via Cisco Catalyst 3750 Ethernet switches, and all servers connected to the SAN will connect via Cisco MDS 9124 Fiber Channel switches.

Wide Area Network Infrastructure

Per the proposed Wide Area Network (WAN) network infrastructure, all required equipment and services will be provided to connect the central VoteCal system and servers to the SOS and its associated county elections office networks. The SI vendor is proposing the deployment and installation of Cisco 2811 modular routers at the 10 largest counties and Cisco 1841 modular routers for the remaining 48 smaller counties.

The SI vendor has performed a thorough assessment and analysis of the bandwidth needs found in the RFP, and has determined that 3Mb/sec of bandwidth is required to meet the SOS's enforced performance and capacity requirements for the 10 largest counties. The remaining 48 counties will require 768k/sec of bandwidth to meet the enforced performance and capacity needs.

WAN Support

The Secretary of State is elected and held accountable by Californians to ensure timely and accurate elections. As such, the SOS must have the ability to control the WAN at all times. Currently, WAN support is provided by DTS. In addition to having direct control and responsibility for the WAN for business purposes, the SOS support of the WAN will cost less than receiving those same services from DTS.²

As part of the project, the SOS's network personnel will work directly with county election offices' technical resources on the design and implementation of the VoteCal network.

3.6.1.5 Technical Platform

The proposed VoteCal solution will be entirely based on current Microsoft technologies. These technologies include the use of the .NET 3.5 Framework and .NET Enterprise Blocks as a platform to construct this web based application. The application physical tier is divided into a classic three-layer architecture: presentation, business logic, and data access. Through the data access layer, the application will rest on a physical data tier based on the Microsoft SQL Server 2005 Enterprise RDBMS. To serve the SI vendor's comprehensive reporting strategy, Microsoft SQL Server Reporting Services (SRS) will be deployed as an embedded component of the overall system. Because of the emphasis on Microsoft Technologies, the SI vendor team has brought on Microsoft as a partner to provide architectural consulting services for the project.

3.6.1.6 Development Approach

Development activities will be completed by the SI vendor and the EMS vendors. VoteCal system development will use the Catalyst Illinois Statewide Voter Registration System (IVRS) as an accelerator. Substantial portions of the database schema including tables, stored procedures, and views will be reused. Business classes will be reused. Interface design will borrow heavily from the IVRS. Overall concepts of a bottom-up statewide voter registration system and lessons learned from Illinois will guide the new

² Based on CALNET2 pricing, the cost of a vendor-managed multiprotocol label switching network to support VoteCal under DTS's proposed third-party provider will be approximately \$1,071,888 annually (first year's costs of \$535,944, and \$1,071,888 thereafter), exclusive of DTS administrative charges. The SOS's management of the same network support will be \$561,059 annually (first year's costs of \$280,530, and \$561,059 thereafter), or \$1,787,902 less over the life of the project.

development needed to meet the diverse and comprehensive California business requirements.

The EMS vendors will remediate their existing systems to meet project requirements. Some reduction in the total number of EMSs will occur during the project based on election officials' stated desire to migrate and on the SOS strategy to support the migration of county elections offices to minimize the number of required interfaces. (The six existing EMSs include DFM, Premier, VoteTech, ES&S, Crest, and an Access database created by one county elections office.) The focus on reducing the number of EMSs that must interface with VoteCal is a goal to assist in reducing the potential long-term maintenance issues as well as technical challenges integrating with VoteCal.

3.6.1.7 Integration Issues

The primary integration issue, as defined in the original FSR, is the necessary integration between VoteCal and the existing EMSs to meet the HAVA requirements for a uniform, centralized voter registration system. To facilitate this level of integration, the SI vendor will be responsible for overseeing the implementation of the integration infrastructure and working with EMS vendors to ensure they can properly connect to this infrastructure. Due to the need to keep data in the county systems integrated with the VoteCal database, the integration infrastructure will need to be highly available (i.e., experience very little downtime). Fifty-one of the county elections offices use either the DFM or the Premier system.

Costs to remediate EMSs and migrate from one EMS to a HAVA-compliant EMS are very difficult to predict at this point in the project since the SI vendor has not yet determined the technical specifications to which the EMS vendors must remediate their systems. Thus, the SOS based the remediation and migration costs on the Interim Solution as well as an understanding that the work to be done to integrate with VoteCal will be greater than the work that was done as part of the Interim Solution. Costs for remediating the EMSs and migrating some county elections offices to new EMSs for the Interim Solution were approximately \$3.115 million. Costs for migrating from one EMS to another for the Interim Solution ranged widely - from .56 per voter to \$56.02 per voter.

In addition to using the actual costs for the Interim Solution, cost estimates to remediate or migrate are based on a number of activities EMS vendors will need to take, including:

- Participating in joint application design (JAD) sessions with the SI vendor to define requirements for EMS changes
- Conducting JAD sessions with respective county elections officials' staff to further define changes to the EMS
- Planning the development work needed for their respective EMSs
- Remediating their respective systems
- Testing their systems
- Piloting their remediated systems
- Deploying their respective systems
- Providing training to county elections staff on changes to the EMS. Staff in county elections offices migrating to a new EMS will need a greater level of training, since the system will be new to the staff.

The variability likely to be seen between costs for the EMS vendors can be attributed to a number of factors including:

- Amount of functionality the EMS currently provides that will need remediation
- Number of county elections offices using the EMS, which can increase the number of issues that arise
- Amount of data the EMS currently houses (e.g., vote history), which can increase the number of data conversion issues that arise
- Number of records the EMS currently houses, which impacts the length of time for data conversion activities

3.6.1.8 Procurement Approach

With the exception of the SI vendor, EMS vendors, and county elections offices, all contracted resources for the VoteCal Project either have been or will be retained using either the state's Master Service Agreement or California Multiple Awards Schedule leveraged procurement options.

Because the changes to EMSs are expected to be fairly complex, and the SI vendor must work directly with EMS vendors to establish requirements and a schedule, the SOS intends to contract with EMS vendors to remediate their systems to become VoteCal compliant based on specifications to be produced by the SI vendor. County elections officials are likely to contract directly with EMS vendors to which they want to migrate, and will be reimbursed for these pre-defined costs.

The SOS intends to negotiate contracts with each county elections official to reimburse them for their reasonable, appropriate, and documented labor costs and direct expenses associated with their participation in JAD sessions, training, data conversion, testing, and implementation.

3.6.1.9 Technical Interfaces

The SI vendor will need to work with the applicable external agencies (DMV, CDPH, CDCR, and EDD) to determine acceptable data definitions and update protocols and to ensure that any actions that need to be taken by these agencies are coordinated with the overall project schedule. These interfaces are currently in place and provide information to Calvoter I. The VoteCal environment proposed by the SI vendor is required to use these existing interfaces. Interfaces in place include those with:

- DMV to validate driver's license and change of address information.
- DMV to the Social Security Administration for Social Security information.
- CDPH to receive records on deaths.
- CDCR to receive information on felons.
- EDD to validate and correct address information against the U.S. Postal Service's National Change of Address (NCOA) system.

3.6.1.10 Testing Plan

Because of the critical nature of VoteCal to the conduct of elections, special focus is given to the testing process. As defined in the Resource Requirements section below, resources from the SOS, the county elections offices, and the SI vendor will be involved in various phases of testing to ensure minimal risk is encountered when VoteCal "goes live." This includes a pilot implementation approach as detailed in the project schedule.

The SI vendor's testing methodology incorporates both positive and negative testing scenarios into each type of testing, providing a complete coverage of all of the possible outcomes to verify that the solution performs to specifications. (Negative testing, or testing for fail conditions, is where the expected outcome is a failed test. Positive testing, or testing for pass conditions, is where the expected outcome is a passed test.) Through application of both types of testing scenarios, the application can truly be fully tested to verify it is operating to specifications.

The testing approach is structured by phases and further divided into tasks and subtasks. Tasks and subtasks are activities performed throughout the project, and each phase may require a set of unique or like tasks and subtasks.

As part of the planning phase, the SI vendor and EMS vendors will develop comprehensive test plans, test scripts, tracking, and reporting of test results, and error resolution methodology. A Quality Assurance Manager, under contract with SOS, will assist in ensuring high quality products and services are delivered during this phase.

The VoteCal Project Team will provide oversight of all test activities and will appropriately engage the EMS vendors and county elections staff to ensure a complete and thorough approach to the overall testing process. Additionally, the Independent Verification and Validation (IV&V) vendor will evaluate the system through the testing results.

3.6.1.11 Resource Requirements

Based on the selected solution, lessons learned from the Interim Solution, and a survey of other states using similar systems, the following resource requirements have been identified.

New Staff

The SOS staffing needs for the VoteCal Project include both redirected and new staff. The SOS received approval for 12 personnel years (PYs) via a Budget Change Proposal (BCP) in FY 07-08. (Two of the positions are currently filled.) Due to the delays in securing a vendor, the SOS sought and received authority to delay the establishment of 10 of those positions to FY 08-09. The SOS worked with DOF to establish the remaining positions and is in the process of hiring those the project currently needs. Since the SOS realigned the staff needs based on the actual solution and lessons learned from other states, the remaining positions will not be needed immediately. The DOF has agreed to approve continuation of the positions should the SOS not hire within the prescribed time frame. The duties for the previously approved 12 PYs in support of the VoteCal Project and ongoing program are as follows.

System Administrator & Help Desk Lead

This position will oversee and direct the work of the VoteCal team once the project is deployed; ensure ongoing program compliance with the mandates of HAVA and the National Voter Registration Act of 1993 (NVRA), including uniform list maintenance practices; ensure continued development of the project team; provide training and guidance for implementation, support and maintenance of the statewide voter registration database involving transfer, analysis, and processing of data files; identify and troubleshoot software and hardware problems; and develop training material for staff and users on an ongoing basis.

Help Desk & User Support

As the primary contact for county elections officials' staff inquiries regarding procedures and practices, these three positions will take all incoming calls, assign work to the appropriate staff person, and document the assignment and the resolution. These staff will act as the first line of technical assistance for VoteCal functionality used by county elections officials' staff.

Training Coordinator

This position will coordinate staff for training and field support for 58 county election offices; establish communication networks among sub-groups of county elections offices to promote uniformity of practice and procedure; monitor user issues to identify training needs; and manage training of county elections staff on an on-going basis.

Data Analysis & Reporting

Upon implementation, this position will define and capture metrics on VoteCal related to system use and performance, county election office participation, data accuracy and voter registration trends; analyze system metrics and report results to improve program effectiveness and identify potential emerging issues; create ad-hoc queries as required to extract statistical data in response to inquiries from management, governmental agencies, media representatives, political scientists, and other interested members of the public; maintain and update an existing set of pre-defined "standard reports" in VoteCal; define and create new "standard reports" for VoteCal in response to emerging needs; and provide technical assistance to state and county users in creating one-time reports within VoteCal.

Monitoring & Compliance

This position will monitor county elections officials' compliance with respect to program participation (e.g., ensuring county elections officials are providing regular and timely updates to the system, performing list maintenance activities within established standards, and ensuring data synchronization between state and county systems); monitor county election office performance and timely resolution of data exceptions (e.g., identifying incomplete registration affidavits, potential duplicate registrations, cross-county voter moves, potential death record matches, etc.); monitor system version control and oversee system testing with county elections offices, vendors, and stakeholders; and provide assistance to county elections staff in resolution of data exception issues.

Communications Lead

This position assists in ensuring county elections officials are informed stakeholders throughout the project by facilitating regular discussion and feedback from county elections officials and other stakeholders at decision points in system development. This position also serves as the Web Master for the VoteCal Project website, which will be a primary communication tool used to ensure practices and procedures are uniform across the 58 county election offices on an ongoing basis.

Voter Registration Data Request Fulfillment

This position will respond to public inquiries from candidates, committees, consultants, journalists, academics, and others about the availability of voter registration data, the cost and procedures for obtaining such data, and technical questions about the format of such data. When VoteCal becomes the main system for voter registration records, requests previously directed to county elections offices that had the most recent official data are expected to be directed to the SOS.

Project Contract Administrator

This position will manage the contracts with all contractors and counties; guide the development of contract vehicles and manage and oversee related contracts for the project during the procurement and implementation phases, as well as monitor deliverables and invoices against contract requirements to ensure alignment.

VoteCal Programmer Analyst

This position will mitigate the risk of performance issues on the part of the vendor by gaining expertise in the design and operation of the application from the onset of the project; work closely with the vendor and the technical architect with the intent of becoming familiar enough with the application to be able to provide application support if the vendor fails to do so; serve as the SOS's long-term technical expert for the application; and provide future application development services, knowledge transfer and technical leadership to the SOS's other ITD staff.

VoteCal Network Analyst

This position will plan, design, implement, and operate the VoteCal network from the onset of the project to ensure the VoteCal upgrade is complete before the pilot county elections offices begin testing. The position will staff the ongoing operation of the network.

Redirected Staff

Staff providing special expertise will be redirected occasionally to work on VoteCal on an ongoing, as-needed basis during and after implementation. HAVA imposes reporting requirements that demand the dedicated time of accounting and other oversight staff. Per HAVA requirements, the time for these staff is included in the redirected staff allocation. The ongoing redirection of the equivalent of 3.8 PYs is required for the following expertise:

- Elections Subject Matter Experts
- IT Division Chief
- IT Subject Matter Experts
- Accounting and Administrative Staff
- HAVA Coordinator
- SOS Chief Information Officer

Contracted Resources

The following resources have been or will be retained for the project through established contracting processes:

- SI Vendor (Catalyst)
- EMS Vendors
- Independent Project Oversight Consultant (IPOC) (Continuity Consulting)
- IV&V (Information Integration Innovation & Associates [I-3])
- Project Management (TBD)
- Project Assistant (ComSys)
- Technical Architect (TA) (TBD)
- Quality Assurance (QA) Manager (TBD)
- Independent Security Auditor (TBD)

The responsibilities of most of these contractors have been defined elsewhere in this SPR. The QA Manager is charged to develop and maintain QA processes and plans, and manage work to assure the deliverables meet both external and internal requirements and achieve superior quality and reliability levels.

The TA is responsible to ensure that the technical deliverables meet all the requirements and specifications prior to the SOS acceptance of the deliverables for payment. The TA will participate in JAD sessions, develop deliverable expectations documents, participate in running acceptance test scripts, and provide technical performance reviews. The TA will serve as a daily technical advisor to the Project Manager and will work closely with the SI vendor and ITD Leads to identify and mitigate risks and issues that impact SOS applications and infrastructure. The TA will also serve as the liaison between the SI vendor and the external agencies to ensure a smooth transition to the VoteCal solution.

The SOS also intends to contract with an Independent Security Auditor to conduct an independent security assessment of VoteCal. VoteCal security assessment will be conducted during the test phase of the VoteCal Project. Specific tasks associated with the security audit can be found in section 3.6.1.1.13 Information Security.

County Elections Officials Resources

Since county election officials' participation and cooperation is vital to the success of the VoteCal Project, the SOS determined it is necessary and appropriate to negotiate contracts to reimburse county elections officials for reasonable, appropriate, and pre-defined direct costs to implement VoteCal. County elections officials are expected to incur staff expenses during the course of design, development, data conversion, testing, training, and deployment.

While the original cost projections in the FSR did not include reimbursement of one-time county elections office expenses for implementation of VoteCal, it has since been determined that such expenses would be allowable under HAVA so long as reimbursements are limited to extraordinary pre-defined expenditures that would not otherwise have been incurred if not required by deployment of VoteCal.

3.6.1.12 Training Plan

As part of the VoteCal Project, the SI vendor is required to provide a detailed Training Plan.

To operate effectively in the VoteCal environment, SOS employees and county elections staff must be equipped with the skills, knowledge, and abilities required to use the VoteCal system to achieve the SOS's desired business results. The Training Plan will further define the approach to training the county elections officials' 533 voter registration staff as well as SOS staff—the two major categories of users. The types of training envisioned include:

- **End-user training.** The focus of end-user training is two-fold: 1) to provide initial training to SOS and county elections staff to operate the system, and 2) to provide SOS VoteCal trainers with the competency, materials, and necessary support to provide ongoing training once the system is operational.
- **Project Team and technology personnel training.** This will provide designated SOS IT support and Help Desk staff with the proficiency needed to be productive team members during preparation and implementation and to prepare them to provide first-tier support for the new solution after implementation.

3.6.1.13 Ongoing Maintenance

The initial contract includes one year of application maintenance and support. The bidder also provided, per RFP requirements, an optional five-year ongoing application maintenance contract. The SOS intends to exercise the optional five-year application maintenance contract. The SOS Elections Division staff will provide first-level support, (i.e., answering calls that are not of a highly technical nature), with escalation of VoteCal issues to the SI vendor during this support period.

In addition to application maintenance support, the SI vendor bid five one-year hardware maintenance contracts. As part of the VoteCal project, the SOS intends to exercise the first of these one-year hardware maintenance contracts.

The county elections offices and the SOS will continue to provide their own desktop computers and local network infrastructure (i.e., LANs) as well as technical support for these areas.

3.6.1.14 Information Security

The SI vendor has placed security and the implementation of the SOS security strategy at the forefront of its solution due to the sensitive nature of system data contained within VoteCal data stores. The SI vendor will implement firewalls, which segment the network into three primary zones, each of which is isolated via Cisco Adaptive Security Appliances (ASA) and access-list based restrictions and permissions. The three primary security segments are:

- DMZ Segment – Isolated external-facing environment
- Trusted LAN Segment – Isolated internal environment specifically for user access to VoteCal application servers
- Protected LAN Segment – Protected environment specifically designed to protect VoteCal database servers and the data stores installed on those servers

Any traffic that originates from a user or another VoteCal interdependent system will either be explicitly allowed or denied, so the only traffic that is permitted to flow through a firewall interface is allowed per its configured access lists. In addition, Cisco ASA firewalls and their

associated access-list restrictions will be implemented at the 58 county elections office sites so that: (1) no county elections traffic can flow from one county to another, and (2) no non-VoteCal SOS traffic can penetrate any county elections officials' network. The SI vendor has employed several techniques in order to provide very strict rules-based authentication policies through a two-tier authentication methodology. The SI vendor will employ VeriSign's Unified Authentication solution in conjunction with Active Directory in order to provide industry standard user authentication security prior to being granted access to VoteCal. Strong passwords and a credit card-based random one-time password generator will restrict user access to only those users that are authorized to access VoteCal. Furthermore, passwords that are stored in Active Directory will be encrypted to provide a further level of security for VoteCal.

Server hardening and security vulnerability scanning will also be implemented in order to ensure the SI vendor's server infrastructure components are locked down using industry standard methodologies. The SI vendor will employ industry-standard server hardening techniques such as the "principle of least-privilege accounts" and "disabled by default" in conjunction with a vulnerability-scanning tool to ensure that all VoteCal server architecture is hardened using industry best practices.

The SI vendor is also proposing redundant intrusion protection and detection devices to ensure that detection of suspicious or malicious activity can be identified prior to any incident. All traffic not only must pass through the firewalls and their associated access-lists, but traffic is inspected by the devices to ensure validity.

Secure Socket Layer encryption techniques and proprietary asymmetric and symmetric encryption solutions will be used to ensure that in-transit network traffic cannot be compromised. All data at rest within the VoteCal storage environment or within non-volatile memory within VoteCal will be encrypted via native features in SQL Server 2008 Enterprise Edition.

The SOS also intends to conduct an independent security assessment of VoteCal during the test phase of the VoteCal Project. All systems will need to be in the proposed production state to ensure an accurate posture analysis. Tasks include but are not limited to the following:

- Approximately 70 hosts to scan for vulnerabilities
- Web application interface vulnerability scans
- Administrator and user staff interviews
- Policy, process, and procedure review
- Data classification review
- Security Assessment Reports, including:
 - Enumeration Report
 - Vulnerability Report
 - Remediation tasks
 - Recommendations

3.6.1.15 Confidentiality

No change to this section from the approved FSR.

3.6.1.16 Impact on County Elections Officials

The most significant decision made on the project that impacts the end user is to not replace county elections officials' EMSs. The end user will see the same vendor's screen (front end remains the same) and have minimal changes to business functions as a result. This decision was made specifically to reduce any potential negative impact on end users. Even though the EMS will not be replaced, integration with VoteCal will result in changes to business process (e.g., greater reliance on automated processes) and the application functionality. The result will be that more uniform, complete, and accurate data will reside in the statewide database. Additionally, processes for verifying voter eligibility and list maintenance functions will be built into the system, reducing the need for extensive and time consuming list maintenance activities. The proposed solution will also reduce administrative and mailing costs due to improved list accuracy (i.e., one voter, one record).

In addition to the information provided in the original FSR, the VoteCal project team has taken steps to collaborate and communicate with county elections officials from project inception through the end of the procurement process to keep the county elections officials informed and solicit their input so as to better meet their needs. The SOS has undertaken the following activities:

- The SOS formed a county elections officials' advisory committee to solicit concerns and preferences regarding implementation of a HAVA-compliant statewide voter registration database system. This feedback was incorporated into the initial strategy for VoteCal and the draft RFP requirements.
- Prior to finalizing the RFP, the SOS formed two advisory committees with selected county elections officials, representing a mixture of policy and technical staff and a mixture of EMSs. The first committee, made up of representatives from larger counties, reviewed the draft VoteCal system requirements and the draft technical requirements. The second committee, made up of representatives of smaller counties, reviewed all the draft requirements for the optional VoteCal EMS, as well as the draft technical requirements. Input from these committees was directly incorporated into the RFP before release.
- Shortly after the release of the RFP, the SOS staff attended regional meetings around the state with county elections officials to review the RFP, its requirements, and the procurement process in general. In those meetings, county elections officials were encouraged to ask questions and express concerns, as well as to provide written feedback once they had reviewed the RFP. Wherever appropriate, county feedback and suggestions were incorporated into the RFP requirements. The SOS also addressed all questions raised by county elections officials during this process in Frequently Asked Questions that were published on the VoteCal website.
- The SOS VoteCal project team regularly attended meetings of the HAVA Implementation Subcommittee of the County Association of the Clerks and Elections Officials (CACEO), as well as association conferences to provide briefings on the status of the procurement process and answer questions to the degree allowed under the confidentiality restrictions of the procurement process.
- At all critical milestones during the procurement process, the SOS sent notices to all county elections officials via emailed memos to the CACEO list serve.

3.6.1.17 Impact on Existing Systems

The new VoteCal system will replace the existing Calvoter I application. As such, EMSs used for voter registration will need to be remediated or replaced (some counties may migrate to another EMS) to meet VoteCal requirements.

3.6.1.18 Consistency with Overall Strategies

The proposed solution is consistent with the objectives of the SOS's Agency Information Management Strategy (AIMS).

3.6.1.19 Impact on Current Infrastructure

The existing WAN will need to be updated to support VoteCal for all county elections offices. New servers will be used to implement the state portion of VoteCal. Remediation of existing EMSs is not expected to require new hardware. However, county elections offices migrating from using one EMS to another are likely to require changes to county workstation or server hardware.

The migration of eight county elections offices to a new EMS during the Interim Solution effort has shown that such migration can be completed at a relatively low cost and level of disruption to the affected county elections officials' staff.

3.6.1.20 Impact on Data Centers

Due to the mission-critical nature of VoteCal as it relates to the conduct of elections in California, the SOS is proposing to house the primary system at the SOS so the Agency has the ability to make support and continuity its top priority. To this end, the primary servers will be installed at the SOS's site with backup in the DTS COEMS environment. The FSR proposed the primary system in DTS COEMS with a backup at a third-party provider. The solution in the SPR does not change the footprint or environment envisioned at DTS and does not require SOS to build out its existing floor space to accommodate VoteCal.

The SOS facility provides a high-security environment, including a 24-hour, 7-days-a-week private security detail with guards who make rounds through the server room outside of regular business hours. The room itself has its own perimeter and interior internet protocol (IP) video surveillance system, smoke/fire/water leak detection, IP sensors for temperature and humidity detection and reporting, five air handlers with humidification and chilled water independent of the central plant, and Uninterruptable Power Supply (UPS) and power filtration with a backup diesel power generator.

3.6.1.21 Data Center Consolidation

See above.

3.6.1.22 Backup and Operational Recovery

In order to meet the availability and operational recovery needs of VoteCal, the recommended alternative requires the following actions:

- Software and Data Backup and Restoration: To support the external storage requirements of the recommended alternative, the existing SOS's backup and recovery environment will be augmented with additional storage devices.
- Continuity of Operations: To support the redundant server approach of the recommended alternative, the services of the DTS COEMS environment will be used. Using the COEMS space at a DTS data center provides VoteCal a secure place to physically house the hardware and other equipment required for the redundant site. The DTS facility provides a high-security environment, including fire detection and suppression devices, multiple connection feeds, filtered power, backup power generators and other features to ensure high availability.

3.6.1.23 Public Access

No change to this section from the approved FSR.

3.6.1.24 Costs and Benefits

The estimated one-time costs of implementing the proposed solution are \$41,242,734. Annual ongoing costs are estimated to be \$4,780,884. Total costs are projected to be \$51,122,765 or approximately \$15 million less than initially projected. All cost details are documented in the EAWs.

The overriding benefit of the project is to enable California to comply with federal HAVA requirements. Additional ancillary benefits to county elections officials, the SOS, and California's registered voters may be achieved over time, but are not the purpose of deploying VoteCal.

3.6.1.25 Sources of Funding

To ensure all states were able to successfully meet the HAVA voter registration database requirements, the federal government provided one-time funding to states. California allocated \$66 million for the VoteCal Project. Since revised estimates are approximately \$15 million less than initial estimates, the SOS expects to use the balance to pay for three additional years of maintenance and operation. Thus, deployment and approximately four years in total of maintaining the system will be wholly paid for with HAVA funds.

3.7 Implementation Plan

This SPR, in its totality, defines how the proposed solution will be implemented. Generally, the SOS will work closely with county elections officials, their EMS vendors, and the SI vendor and its subcontractors to integrate VoteCal with EMS systems so California is HAVA compliant. The following is a high-level description of the SOS's implementation approach.

County elections officials will be invited to participate in JAD sessions, will receive training on VoteCal and their remediating EMS, and will be asked to participate in data conversion and data cleansing activities. The SOS invites county election office participation and will rely on it to ensure the successful deployment of VoteCal.

At least two of the six EMSs will be remediating to integrate with VoteCal. Several county elections offices may migrate to another existing EMS, thereby reducing the number of

EMSs with which VoteCal must integrate. This will reduce technical challenges by integrating with fewer EMSs and reduce ongoing maintenance costs. Deployment will occur in such a way as to minimize disruption to the election cycles. Training and materials will be provided to county elections officials to explain any changes to business process as well as to their EMSs.

The Project Manager will use an industry standard project management methodology as defined in the Information Technology Project Oversight Framework (ITPOF). One aspect of project management is risk and issue management. The project team will identify and manage risks through a rigorous risk and issue management approach that includes a defined process with identified roles and responsibilities for capturing risks, analyzing risk levels, and identifying the party responsible for tracking and managing each risk and issue in a Risk Log.

The SOS developed a Communication Plan that identifies stakeholders and defines the message, frequency, and media with which the SOS will communicate with stakeholders to ensure common knowledge of the approach and schedule. Frequent communication will minimize misunderstandings and ensure county elections officials' input into the process.

The following section describes the approach the SOS is taking to project management.

4.0 UPDATED PROJECT MANAGEMENT PLAN

The SOS recognizes that a structured approach to project management is required to ensure the successful implementation of the VoteCal proposed solution. As agreed upon between the SOS and the Office of the Chief Information Officer (OCIO), the VoteCal Project will continue to be managed with project management methodologies based on the policies in place in March 2006 when the project was approved. To the extent practical, the methodologies will be adjusted to be consistent with the state's Statewide Information Management Manual Section 17, California Project Management Methodology (CA-PMM).

The RFP required the SI vendor to provide a draft of its PMP for the implementation of the VoteCal solution. The PMP will be integrated with the SOS's overall VoteCal project management approach, which will include all controlling documents for managing VoteCal design, development, and implementation and will also include activities related to this project for the SOS staff as well as vendor staff resources. The vendor will use its plan to define the technical and managerial project functions, activities, tasks, and schedules necessary to satisfy the project requirements.

The overall plan for implementing the solution will identify tasks, start and completion dates, task initiation and completion criteria, relationships and dependencies among tasks, timing, major deliverable milestones, resource allocations, and will provide a preliminary schedule (Gantt chart). This plan includes a resource management component (e.g., roles and responsibilities) to be used during the implementation. The overall VoteCal PMP will be used to track the achievement of project milestones and to provide the basis for ongoing project communications.

4.1 Project Manager Qualifications

An experienced Project Manager is critical to the success of any project. It is the Project Manager's responsibility to ensure the project meets functional requirements and comes in within budget and on time. Due to the retirement of the SOS Project Manager who led the VoteCal Project through the procurement phase to select the SI vendor, the SOS is currently undertaking a procurement effort to identify and contract with the best qualified resource to fill the role of Project Manager for the design and implementation phase of the VoteCal Project. The Project Manager is also responsible for overseeing the EMS vendors' work, such that VoteCal meets the defined scope, budget, and schedule.

The SOS Project Manager responsible for the VoteCal implementation will be selected based on an evaluation of the following qualifications, skills, and experience:

- Previous experience managing IT projects of similar size, scope, and complexity
- Knowledge of team leadership principles including working with many stakeholders
- Previous experience managing an SI vendor
- Knowledge of risk management planning
- Appropriate project management certification

The Project Manager is responsible for managing the project on a daily basis. As such, she or he will interact with SOS staff, the VoteCal Project Director, the Executive Steering Committee (ESC), county elections officials, county elections staff, and EMS vendors' staff.

It is critical that this person have experience managing many aspects of a single project to a common schedule.

This SOS Project Manager will work with the two SOS Elections Division Project Leads and the two SOS IT Division (ITD) Project Leads on a daily basis. The SOS Elections Project Leads will represent Elections Division program concerns and provide technical, functional, and program knowledge. They will also participate in specific VoteCal QA activities, training, and deployment, and will serve as liaisons with county elections staff. The SOS IT Project Leads will provide the IT Division's vision to the project, coordinate the activities undertaken by ITD staff, and ensure alignment with the SOS's overall architectural strategy.

Along with the Project Director, this team will act as the VoteCal Core Project Management Team, responsible for undertaking the day-to-day VoteCal activities and making decisions on VoteCal issues, as well as working with the SI vendor's Project Manager, EMS vendor Project Managers, and any other resources involved in the delivery of the VoteCal Project.

SI Vendor Project Manager

The SI vendor will provide a Project Manager for its portion of the project involving design, development, and deployment of its proposed products and solutions. The proposed Project Manager is experienced in managing projects of this size and complexity that utilize the products and solutions selected, and he meets all of the defined Project Manager requirements contained in the VoteCal RFP.

EMS Vendor Project Managers

The EMS vendors contracted to provide remediation and migration services to the county elections offices will also be required to provide a Project Manager for their portion of the project to work closely with the SI and the SOS's Project Managers. The EMS Project Managers will be required to have experience commensurate with the scope and nature of the work being completed.

The VoteCal Project is complex and requires all Project Managers to work closely with each other to achieve a successful deployment of a HAVA-compliant system. The SOS will set the tone for team work toward this goal.

4.2 Project Management Methodology

4.2.1 VoteCal Project Management

As stated previously, the VoteCal Project will continue with the Project Management Body of Knowledge (PMBOK) project management methodology. As a result of employing an industry standard project management methodology, the project will adhere to a methodology which includes:

- Ensuring adherence to established scope
- Evaluating costs and ensuring adherence to budget
- Developing activities/work breakdown structures
- Defining project roles and responsibilities and managing staff to their responsibilities
- Developing a detailed project schedule, including milestones and deliverables
- Completing a Quality Assurance Plan
- Completing and adhering to a Risk Management Plan

- Completing and adhering to an Issue Management Plan
- Developing and maintaining a risk and issues log
- Conducting ongoing project performance review and project plan updates
- Completing and adhering to a Contract Management Plan
- Completing an Organizational Change Plan that smoothes the transition for county elections officials and their staff
- Managing all aspects of the project on a daily basis
- Comparing planned and actual progress to date
- Completing project closeout

Many of the above activities are already underway. The VoteCal Project Team will work closely with the SI vendor to ensure the vendor’s methodologies, plans, and tools are closely integrated with SOS’s efforts, so that the overall methodology will reduce duplication of data entry which could possibly lead to errors and omissions.

The Project Team will work with the SI vendor to ensure a common toolset is used to manage project activities. Tools required or under consideration include:

- Microsoft Project to help facilitate project monitoring at the task and resource level
- Microsoft SharePoint for project content management to facilitate information-sharing collaboration and content management

4.2.2 SI Vendor Project Management

The SI vendor’s project management approach includes a number of people in lead roles who have been immersed in similar state and local elections technology for a significant portion of their careers. The project management-related requirements described throughout the SOS VoteCal RFP underscore the SOS’s desire for a comprehensive project management approach, methodology, and tools used by an experienced SI vendor.

The SI vendor’s project management approach, methodology, and tools fully address the VoteCal requirements. The SI vendor brings a group of highly skilled and experienced resources to develop and manage the project using the PMP and its supporting plans. The SOS and SI vendor staff will work collaboratively and will come together as a single team with a single goal: to successfully implement VoteCal.

To ensure the VoteCal Project is managed in a consistent and effective manner, the SI vendor will use a standardized project management approach, methodology, and toolset built upon the system development standards defined in the Institute for Electrical and Electronics Engineering (IEEE), system delivery standards as maintained by Capability Maturity Model® Integration (CMMI), and the project

Catalyst’s Demonstrated Project Management Capability

- CMMI Level 3 for system delivery and project management
- Standards based IEEE, Software Engineering Institute, Information Technology Infrastructure Library, CMMI, and PMBOK project management and system delivery methodologies
- 100+ years of experience and leadership in management consulting and government systems
- An established, repeatable process and rigorous project management methodology

management methodology of the Project Management Institute's (PMI's) PMBOK, also accepted by IEEE.

4.3 Project Organization

The VoteCal Project will involve numerous stakeholders in the planning, decision-making, issue resolution, implementation, tracking, and reporting processes related to project activities. The following organization chart and supporting descriptions detail roles and responsibilities and demonstrate how these stakeholders will be organized to facilitate participation and effective tracking and reporting of VoteCal activities. The VoteCal project organization chart (Exhibit 4-1) represents the current VoteCal Project structure; it is the same structure proposed in the FSR but it contains the names of the responsible parties. The organization chart for the Elections Division remains unchanged from the approved FSR. The Agency's organization chart can be seen in Exhibit 4-2 and the ITD organization chart is shown in Exhibit 4-3.

Exhibit 4-1: VoteCal Project Organization Chart

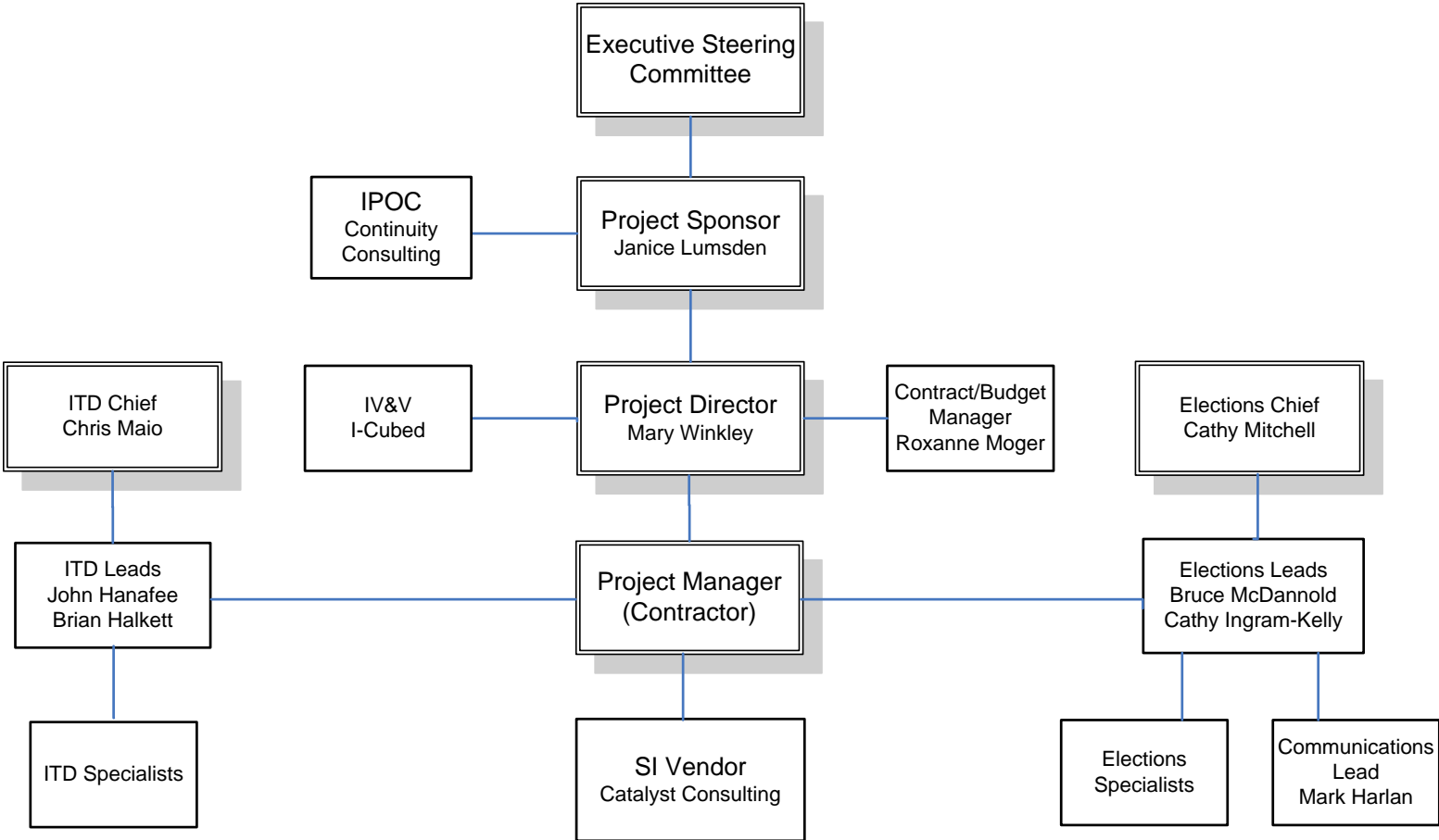


Exhibit 4-2: SOS Organization Chart

**Secretary of State's Office
June 2009**

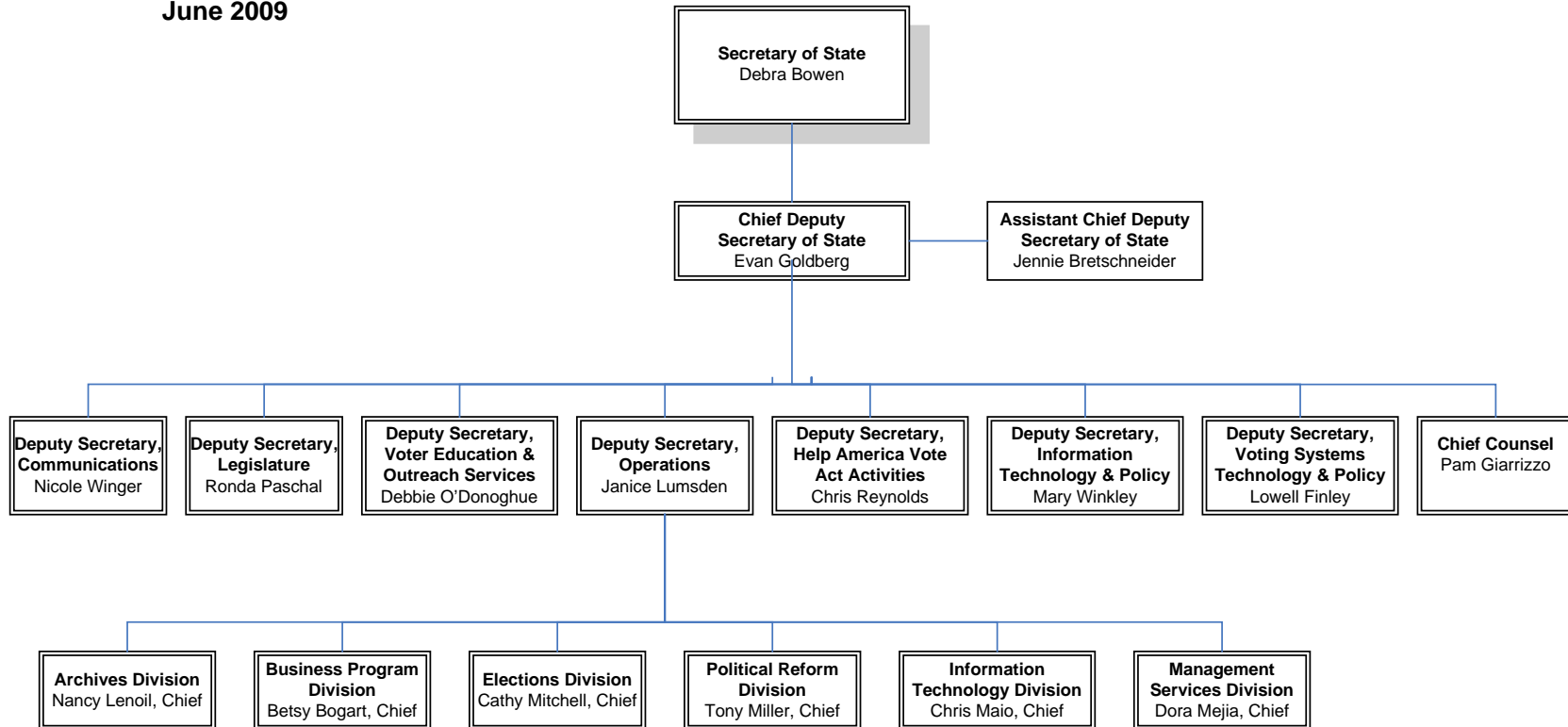
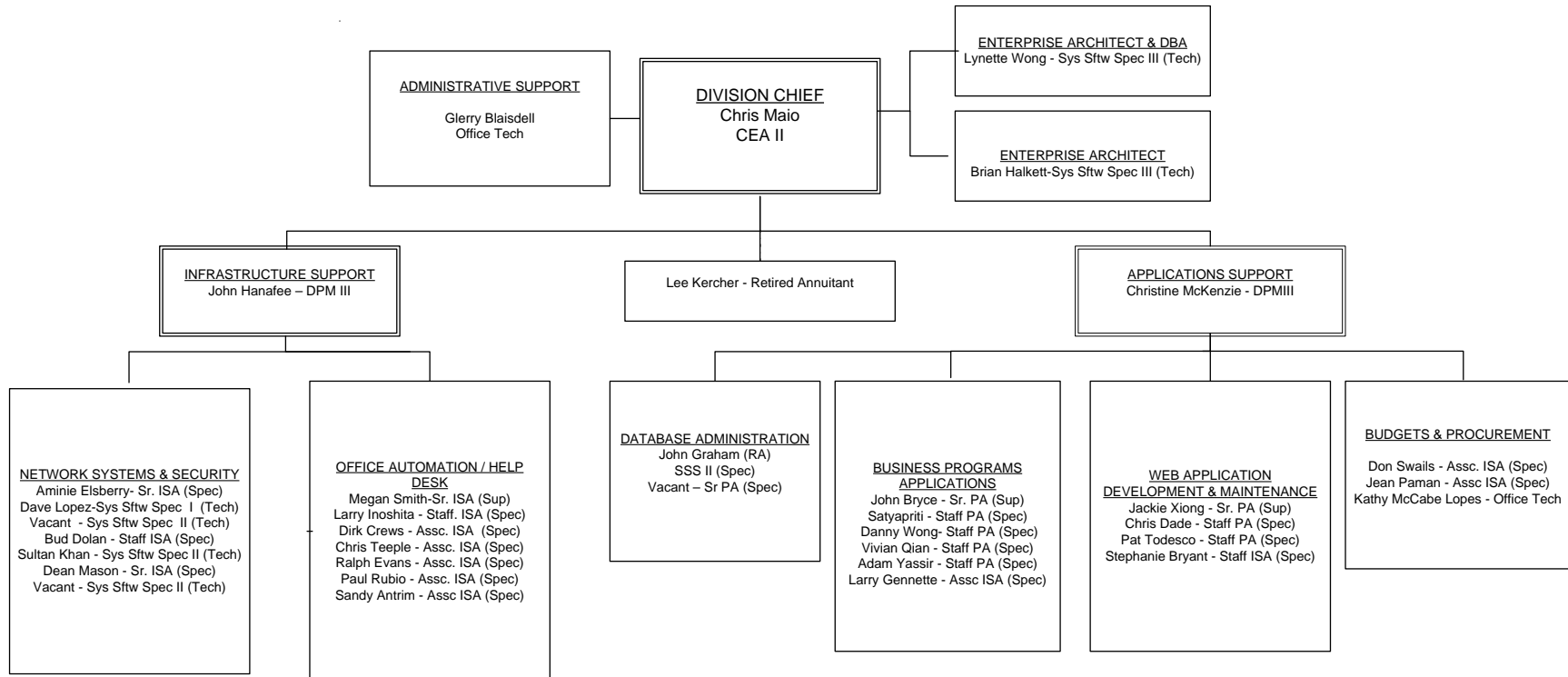


Exhibit 4-3: Information Technology Division Organization Chart



REVIEWED and APPROVED BY: _____
Chris Maio, Division Chief

APPROVAL DATE: _____

4.4 Project Priorities

Managing a project requires balancing three factors: scope, budget, and schedule. These factors are interrelated; a change in one of them will likely cause the others to change. At the beginning of every project, a decision must be made to determine which of the three factors must remain as close to the original plan as possible, which factor has some flexibility, and which has the most flexibility so when issues arise on the project, the Project Management Team can respond to these project priorities appropriately. For VoteCal the three factors are prioritized as:

- Project *scope* is least flexible, meaning that HAVA requirements must be met. The DOF uses the term “constrained” to mean least flexible.
- *Resources* are somewhat flexible, meaning that additional resources can be added to the project. The DOF uses the term “improved” to mean that this factor is somewhat flexible.
- The project *schedule* has the most flexibility, although this does not mean the schedule is not important. The DOF uses the term “accepted” to mean this factor has the most flexibility of the three factors.

Exhibit 4-4 documents the project priorities for the VoteCal Project. Changes to these priorities can only be made by the VoteCal ESC.

Exhibit 4-4: Project Priorities

Scope	Resources	Schedule
Constrained	Improved	Accepted

4.5 Project Plan

4.5.1 Project Scope

VoteCal’s scope, as defined in the approved FSR, is the development, testing, and implementation of a statewide voter registration database that meets federal HAVA mandates and functionality requirements defined in the RFP. The scope of this project includes the following:

- Developing the RFP, the Information Technology Procurement Plan (ITPP), and any SPR(s) to procure and contract with an SI vendor to develop, integrate, deploy, and support the proposed solution.
- Developing the Request for Offers (RFO) to procure and contract for external services (e.g., project management, procurement assistance, IPOC, IV&V, QA, security auditor, and technical assistance).
- Developing the VoteCal application in coordination with county elections officials and their EMS vendors.
- Developing interfaces to other state agencies (DMV, CDPH, CDCR, EDD) to collect data that supports registration ID verification and list maintenance requirements.
- Remediating EMSs to enable them to interface with VoteCal.
- Migrating county election offices that use EMSs that cannot be remediated to a VoteCal-compliant EMS.

- Converting and integrating voter registration and related data from the 58 county databases into the single, uniform statewide VoteCal database.
- Deploying VoteCal to county elections offices.
- Providing VoteCal user training.
- Providing Help Desk services to users.
- Preparing a Post Implementation Evaluation Report (PIER).

The project does not include a statewide EMS or responsibility for the SOS to maintain existing EMSs.

4.5.2 Project Assumptions

The following assumptions have been identified for the VoteCal Project in the most recent Project Charter approved by the ESC. Changes to assumptions from the FSR were identified during the project procurement phase and thus were included in the updated Project Charter.

- The SI vendor must meet the needs established in the RFP.
- The functionality of the proposed system must meet HAVA mandates.
- The SOS must develop the ability to maintain and operate the system after an initial operations period managed by the SI vendor.
- Sufficient SOS resources (whether staff or contractors) must be made available to support both one-time and ongoing activities.
- Although the DTS facilities will house the backup VoteCal system, the SOS will own the system, and the contracted SI or SOS staff will support the system.
- Deployment of VoteCal cannot interfere with local and statewide elections, but testing will occur during an election cycle.
- The proposed VoteCal solution will replace at least all existing Calvoter I functionality.
- The current county and SOS desktop hardware and software environment is adequate to support VoteCal system requirements. No additional desktop upgrades will be required except where county elections offices migrate from one EMS to another.
- There will be timely review and feedback on all project deliverables by reviewers.
- All partner agencies (state departments and county elections officials) will accomplish planned activities within the established timeframes.
- Project management policies in place in March 2006 will govern the management of this project.

4.5.3 Project Phasing

The project is divided into seven phases to ensure discrete and substantial deliverables are provided by the SI vendor in frequent intervals. Each phase has defined activities

and deliverables. The list below identifies deliverables, along with the most recent updated schedule agreed to by Catalyst.

- Phase I - Project Initiation and Planning (10/1/2009 – 01/19/2010)
 - VoteCal System PMP and Schedule
 - Communications Plan
 - Quality Assurance Plan
 - VoteCal Software Version Control and System Configuration Management Plan
 - VoteCal System Issue Management Plan
 - VoteCal System Change Control Plan
 - VoteCal System Risk Management Plan
 - VoteCal System Organizational Change Management Plan
 - VoteCal Requirements Traceability Matrix & Gap Analysis Plan
 - VoteCal System Project Kick-Off Meeting

- Phase II - Design (10/01/2009 - 08/20/2010)
 - VoteCal System Requirements Specification
 - VoteCal System Functional Specification
 - VoteCal System Detailed System Design Specifications
 - VoteCal System Standard Report Specifications
 - VoteCal System County EMS System Integration and Data Exchange Specifications Document
 - VoteCal System Detailed Requirements Traceability Matrix
 - VoteCal System Technical Architecture Documentation
 - VoteCal System Data Model and Data Dictionary
 - VoteCal System Data Conversion and Data Integration Plan
 - VoteCal System Training Plan
 - Ongoing Project Tasks

- Phase III - Development (10/1/2009 - 4/21/2011)
 - VoteCal System Technical Environments Certification Report
 - VoteCal System Test Plan
 - Acceptance Test Plan for Certification of County EMS System Conversion and Compliance
 - VoteCal System Organizational Change Management Plan Updated
 - VoteCal System Implementation and Deployment Plan

- VoteCal System Delivery of Source Code and Source Code Reviews
- Phase IV - Testing (12/21/2010 – 7/11/2011)
 - VoteCal System Pilot County Data Conversion Completion and Report
 - VoteCal System Acceptance Test Completion, Results and Defect Resolution Report
 - VoteCal System Documentation
- Phase V - Pilot Deployment and Testing (2/11/2011 - 9/6/2011)
 - VoteCal System Staff and IT Training Materials and Training Completed for the Pilot County Staff
 - Pilot Testing through Live Election Cycle and Provide Pilot Results Report
 - Updated System, Documentation and Training Materials
 - Revised/Updated System Deployment Plan
- Phase VI - Deployment and Cutover (2/18/2011 – 1/3/2012)
 - VoteCal System County Elections Officials Training
 - Updated Training of the SOS Staff
 - VoteCal System Level 1 Help Desk Policies and Procedures
 - VoteCal System remaining County Data Conversion and Testing for compliance and successful integration
 - VoteCal System Final Deployment Report
- Phase VII - First-Year Operations and Closeout (8/10/2011 – 12/27/2012)
 - Monthly Operations Support and Performance Reports for one year
 - VoteCal System Final Documentation
 - Final SOS System Acceptance Sign-Off

4.5.4 Roles and Responsibilities

The VoteCal Project will involve numerous stakeholders in the planning, decision-making, risk and issue identification and resolution, implementation, tracking, and reporting processes related to project activities. The following descriptions detail roles and responsibilities and identify how these stakeholders will be organized to facilitate participation and effective tracking and reporting of VoteCal activities.

- The **ESC** is responsible for oversight of the project, ensuring that deliverables and functionality as defined in the FSR and subsequent SPRs are achieved. The ESC addresses project issues that change the scope, budget, or schedule by 10 percent or more. The ESC also addresses policy, legal, and highly sensitive issues. The ESC has oversight responsibility of the project and establishes the priorities between scope, budget, and schedule and is an advocate for the VoteCal Project with external stakeholders and within SOS. The ESC comprises

the Secretary, the Chief Deputy, the Deputy Secretary for HAVA Activities, the Project Sponsor, the Elections Division Chief, and the IT Division Chief.

- The **Project Sponsor** provides policy leadership and oversight as needed and, as such, is the Chair of the ESC. The Project Sponsor is responsible for assuring that adequate resources are made available to the project team for successful completion of the project. The Project Sponsor is also an advocate for the VoteCal Project within SOS. The Project Sponsor resolves issues raised by the Project Director that require the development or change of the SOS's policies vis-à-vis the VoteCal Project and resolves issues that cannot be resolved at a lower level.
- The **Project Director** is responsible for the overall success of the VoteCal Project and operational direction of project activities. This position has decision-making authority related to project management decisions, and will ensure that project management practices are being employed appropriately. The Project Director is the spokesperson for the project with the control agencies and the Legislature to secure support for the project. The SOS staff responsible for budget and contract management report directly to the Project Director. The Project Director has responsibility for approving invoices vis-à-vis the VoteCal budget and reports to the Project Sponsor.
- The **Core Project Management Team** comprises the VoteCal Project Director, the Project Manager, two SMEs from the Elections Division, and two SMEs from ITD. This Core Project Management Team, led by the Project Manager, plans, directs, and oversees the day-to-day activities of state Elections and ITD staff. Additionally, this team serves as the principal interface with the VoteCal SI vendor and responds to change requests and coordinates project activities.
- The **Project Manager** undertakes all activities related to the management of a large systems integration project including working with all stakeholders to ensure participation. The SOS will contract for project management services throughout the life of the project. Since the Project Manager will be contract staff, the Project Manager will not have responsibility to approve invoices or oversee contracts. The Project Manager reports to the Project Director.
- The **Contract Budget Manager** ensures the terms and conditions of the contracts are met by all prime contractors and for the fiscal accounting of funds allocated for all contracts. If the Contract Manager identifies a discrepancy, the Contract Manager will bring it to the attention of the Project Director, to whom the Contract Manager reports.
- The **Communications Lead** develops and oversees the implementation of the VoteCal Communication Plan. The Communications Lead may not be the face delivering the message, but ensures the appropriate message is provided to the appropriate audience at the appropriate time in the appropriate medium with the appropriate frequency. The Communications Lead reports to the Elections Division Leads for the purpose of this project.

- The **Elections Division Leads** represent the views of the Elections Division Chief and ensure that all policy and program issues related to elections are resolved. In some cases, the Elections Division Leads will direct the work of Elections Division staff who are asked to assist on an activity-specific basis. The Elections Division Leads guide the Communications Lead and assist the Communications Lead with meeting assigned responsibilities. The Elections Division Leads, for the purposes of this project, report activities to the Project Manager.
- The **Elections Division staff** will work with the Elections Division Leads to ensure the elections business needs are adequately represented throughout the implementation of the VoteCal Project. These staff members report to the Elections Division Leads for purposes of the project.
- The **ITD Leads** ensure IT issues that affect or impact the SOS's applications or infrastructure are resolved. Additionally, the ITD Leads ensure alignment of the VoteCal project with the SOS's IT vision and policies. The ITD Leads will do so by consulting with any and all ITD staff as necessary. The ITD Leads report to the Project Manager for purposes of this project.
- The **ITD staff** will work with the ITD Leads to ensure the ITD is adequately represented throughout the implementation of the VoteCal Project. These staff members report to the ITD Leads for the purposes of this project.
- The **Elections Division Chief** ensures that VoteCal Project decisions support the desired outcome of HAVA compliance and meet the business needs for conducting elections. The Elections Division Chief is a member of the ESC.
- The **ITD Chief** ensures the VoteCal Project decisions are in alignment with IT policies and that the IT Division is prepared to support the VoteCal Project once deployed. The ITD Chief is a member of the ESC.
- The **Deputy Secretary of State for HAVA Activities (HAVA Coordinator)** ensures the VoteCal Project conforms to HAVA; reports the status of the VoteCal Project to the USDOJ; and, in conjunction with the Project Manager, reviews and approves vendor invoices, county claims, and timesheets for payment of HAVA funds for goods or services vis-à-vis the state's HAVA allocation. This also serves as chair of the Stakeholder Advisory Committee and is a member of the ESC.
- The **IPOC** provides oversight and audit activities that make the Project Management Team aware of best management practices and encourages employment of these practices through meetings and oversight reports. A contractor will provide project oversight per the DOF's ITPOF oversight requirements and reports directly to the OCIO's office on project progress. The IPOC also briefs the Project Sponsor on project activities.
- The **IV&V vendor** will provide a traceability matrix that ensures requirements identified in HAVA and the RFP are incorporated into the project through a technical review and verification of project deliverables, as well as independent

testing and auditing of project deliverables against requirements. The IV&V vendor reports to the Project Director.

- The **Stakeholder Advisory Committee** consists of key county elections officials and other external stakeholders impacted by VoteCal. The Stakeholder Advisory Committee provided advice and guidance to project planners on their requirements for the system and concerns regarding its implementation during development of the RFP. The Stakeholder Advisory Committee will also be kept informed of project progress and status. The Deputy Secretary of State for HAVA Activities chairs the Stakeholder Advisory Committee.
- **California County Elections Officials** have been and will continue to be active participants, individually and through their statewide association, in the review of system requirements and implementation of the VoteCal Project. The county elections officials are critical partners in the project's success in that the VoteCal Project will touch each official and their staff members. County elections officials' participation in the development of a reasonable roll-out schedule is critical to the success of the project.
- **California's Control Agencies** have the responsibility to review and approve the project initially as well as follow-on project requests for funding authority, technical reasonability, and/or position requests. The Control Agencies include the OCIO, the DOF, and the DGS.
- The **California Legislature** also has the responsibility to review and approve the project initially as well as follow-on project requests for funding, technical reasonability, and/or position requests. If a request is submitted outside the budget cycle, the Legislative Analyst's Office reviews the request and makes recommendations to the Legislature whether or not to approve the project.
- The **SI vendor** and its Project Manager are responsible for successfully deploying the VoteCal Project by working with the VoteCal Project Team as well as county elections officials and their EMS vendors.
- The **EMS vendors** are responsible for the successful remediation of their EMS applications to fully integrate with VoteCal or to assist county elections offices that choose to migrate to their by working with the VoteCal Project Team, the SI vendor, and county elections officials and their staff.

4.5.5 Project Schedule

The SI vendor proposed a schedule that proposed project work begin on June 1, 2009. Without an approved SPR, the SOS could not begin work at that time. The SI vendor's proposed schedule is presented below. The SOS team modified the schedule based on its understanding of work falling around election cycles and adding the SOS's resource constraints. The SI vendor supports the revised schedule. The actual and anticipated completion dates for the major project milestones of the VoteCal Project have been updated to reflect activities completed to date. Major milestone dates are shown in Exhibit 4-5; this revised schedule is shown in the last column of the following chart.

Exhibit 4-5: Project Milestones

	FSR 07/2005	FSR 03/2006	SPR 08/2007	Proposal 01/2009	SPR 08/2009
Project Initiation to Secure Project Approvals	7/18/05	3 rd qtr 2005	7/18/05	x	7/18/05
Requirements and RFP Development					
Write and Issue RFP	4/05/06	4 th qtr 2006	9/26/07	x	12/13/07
Vendor Selection and Project Planning					
Evaluate Bids		2 nd qtr 2007	6/30/08	x	3/31/09
Award Contract		3 rd qtr 2007	9/15/08	6/01/09	10/1/09*
Project Planning and Scoping					
Complete Planning		4 th qtr 2007	10/14/08	8/04/09	1/19/10*
Complete Design		2 nd qtr 2008	3/05/09	12/17/09	8/20/10*
Complete Development		3 rd qtr 2008	5/14/09	9/09/10	4/21/11*
Complete Testing		2 nd qtr 2009	7/13/09	11/29/10	7/11/11*
System Deployment and Training					
Complete Pilot Deployment		3 rd qtr 2009	9/08/09	1/27/11	9/6/11*
Complete Deployment to all County Elections Offices		3 rd qtr 2009	12/31/09	5/11/11	1/13/12*
Complete one year Maintenance and Operations		3 rd qtr 2009	12/31/10	4/18/12	12/27/12*

* Dates based on SPR being approved by August 30, 2009.

4.6 Project Monitoring

Project status will be tracked and reported on an ongoing basis. Regularly scheduled status meetings attended by the Project Managers, Project Team members and the SI vendor staff will be held to discuss project progress, issues/issue resolution, and next steps. The ESC meetings will continue to be held monthly to discuss project progress, change requests and open issues. Ad hoc ESC meetings are called when decisions cannot wait for the next monthly meeting. The IPOC will provide independent/objective input to the ESC and the OCIO. The Project Director meets regularly with the Project Sponsor to provide oral project status updates. Additionally, the SOS will report all high-severity project risks to the OCIO within 15 calendar days, per Information Technology Project Oversight Framework (ITPOF) guidelines and will submit a monthly status report to the OCIO per CA-PMM. Lastly, the SOS reports on project progress annually to the Legislature pursuant to budget control language.

The SOS will undertake a “top-down” and “bottom-up” approach to project quality. The ESC will provide “top-down” project oversight. The composition of the ESC ensures broad and balanced oversight. The Project Management Team, the Project Director,

and the IV&V vendor will provide “bottom-up” project oversight according to their respective reporting protocols.

4.7 Project Quality

To ensure the project meets identified business and technical objectives and requirements, the SOS has developed initial Quality Assurance/Risk Management Plans based on the ITPOF Project Management Methodology. These plans will be integrated with the SI vendor’s plans to establish the overall VoteCal Project quality approach. The SOS’s plans have the following elements:

- Measurable objectives and functional requirements
- Acceptance testing plan
- Regularly scheduled audits/reviews of key tasks
- Identification of QA responsibility with the ESC
- Use of project oversight and IV&V services

The SI vendor is also tasked with developing a Quality Management Plan as defined below.

The SI vendor’s Quality Management Plan addresses the quality management lifecycle (Exhibit 4-6) by describing the specific activities, metrics, and standards to measure quality on the project.

Exhibit 4-6: Quality Management Lifecycle



Specifically, the Quality Management phases are:

- Define Quality Metrics and Standards – Identifies which quality standards the team will use to measure quality.
- Conduct Quality Assurance – Defines the processes that the team will evaluate on a regular basis to provide confidence that the team follows the project processes.
- Perform Quality Control – Describes the specific measurements that the team will evaluate to determine that project results comply with the relevant quality standards.

The VoteCal Project Management Team will perform or facilitate VoteCal Project QA activities. In addition, as mentioned previously, the QA/quality control (QC) activities of the VoteCal Project team will be planned and coordinated with the IV&V vendor.

4.8 Change Management

The VoteCal Project Management Team will develop a Change Management Plan and process. The Project Director will review change requests for acceptance/rejection. Any decisions that cannot be made by the Project Director will be escalated by the Project Director to the Project Sponsor, who may convene an ESC meeting to discuss the issue and reach resolution.

In the Change Management Plan, change requests will be:

- Drafted by the Project Team (both developers and end users)
- Communicated to the county elections officials, when affected, in time for effective comment
- Reviewed and edited by the Project Managers
- Decided by the Project Director with direction from the ESC if necessary (if change requests impact scope, schedule or cost)
- Implemented by the Project Team

4.9 Authorization Required

Other than the SPR approval process required before the SI vendor's contract can be awarded, no special authorization must be obtained from the federal agencies.

5.0 UPDATED RISK MANAGEMENT PLAN

The VoteCal Project will employ a systematic approach to risk and issue (collectively referred to as risk in this section) identification, management, escalation, and closure. The purpose of the process is to ensure:

- Risks are defined and properly scoped.
- The correct participants are involved in the risk analysis and mitigation process.
- Root causes are analyzed and recommendations are based on sound judgment.
- Specific persons are named to complete action items.
- Actions are tracked to resolution/completion.
- Escalation to a higher level of management is available and is pursued when mitigation or intervention cannot be achieved at the project level in a timely fashion.
- Risks and associated actions and their status are formally documented and regularly reviewed.
- Communication among project stakeholders is appropriate and timely in order to facilitate an understanding of risk impact, develop quality responses, and minimize the disruption associated with rumor and misinformation.

Risk management is an ongoing process, from the inception to the closure of the project, and it is a critical component of project monitoring and control activities.

The SI vendor is required to implement an approved risk management approach that it will apply within its scope of authority. The SI vendor's risk management process will be assumed to be applicable to all SI vendors' partners participating in the VoteCal Project. If the SI vendor needs to update its Risk Management Plan, the SOS will review and approve the changes.

From time to time, the SOS expects risks may arise that are most effectively managed collaboratively. Unless alternative processes unique to this collaborative management are developed, the processes described herein will be applied to all collaboratively managed risks, with each respective Project Manager assuming responsibility for assigning resources (i.e., time, personnel, funding) and meeting agreed timelines. For those risks that will be managed collaboratively, the SI vendor's Project Manager will attend VoteCal Project risk management meetings and will be accountable for overseeing and reporting on mitigation and resolution activities assigned to SI vendor staff. Risks requiring collaboration will be tracked on the VoteCal Project Risks Management Log. Related documentation, including SI vendor-generated documentation related to risk analysis or actions, will be archived within the project library. The VoteCal Project will encourage open, productive communication between the SOS and the SI vendor to mitigate risks at the earliest practical moment for the good of the project.

5.1 Risk Management Log

Exhibit 5-1 provides an excerpt of the Risk Management Log and represents currently identified high- and medium-severity risks as established by ITPOF criteria. The VoteCal Project Manager is currently tracking nine open risks of high or medium severity.

Exhibit 5-1: Risk Management Log

Risk Description	Owner	Impact	Probability	Exposure	Time Frame	Severity
County elections staff unavailable to participate in project, risking county rejection of designed system	Project Director	High	High	High	Medium	High
New requirements introduced during JADs or by users expand project scope	Project Manager	Medium	Medium	Medium	Short	High
Legislature or USDOJ mandates functionality not in current requirements	Project Manager	Medium	Medium	Medium	Medium	Medium
Catalyst corporate culture does not appear to include formal PM practices risking scope, schedule, or quality.	Project Manager	High	Medium	High	Long	Medium
Selected versions of applications platform and/or development tools are not familiar to developers or do not work as anticipated.	ITD Lead	High	Low	Medium	Medium	Medium
County elections IT departments resist required levels of connectivity into their networks or systems	ITD lead	High	Low	Medium	Medium	Medium
Schedule lacks sufficient and correct resources assigned to tasks, risking product quality and/or delivery schedule	Project Manager	Medium	Low	Low	Short	Medium
Adopted and agreed upon schedule doesn't include enough flex such that one or more critical path delays will prevent deployment prior to 2012 elections cutoff (12/2011)	Project Manager	Medium	Low	Low	Short	Medium
Key SOS IT and Elections staff are pulled from project activities to handle emergent agency issues	Project Director	Low	Low	Low	Short	Medium

5.1.1 Risk Assessment

Risks will be analyzed based upon the impact of the risk on the project scope, schedule, budget, or quality, as well as the probability of the risk occurring and timing (relative to project schedule) of the risk occurring. The Project Manager assigns risk analysis and resolution to team members as appropriate.

This section describes the relevant factors that will be evaluated in order to determine the risk's level of severity and the priority to be assigned to each risk. The following process is defined in the ITPOF.

1) Assign an impact rating to the risk

The impact of a risk is the degree of its effect on the project if it does occur. Impact will be assessed in these areas: scope, schedule, budget, and technical performance/quality. A separate impact score is determined for each area. The highest impact score becomes the overall impact score for the risk.

- **High** – If the risk represents a significant negative impact on project budget, schedule, or quality
- **Medium** – If material impacts would significantly affect users, clients, or other key stakeholders
- **Low** – All other risks

Assessment criteria examples for each area are identified in Exhibit 5-2 below.

Exhibit 5-2: Risk Impact Assessment Criteria

Impact	Scope	Schedule	Budget	Technical Performance/Quality
HIGH	Change order required	Unacceptable slip of a key milestone.	Unacceptable - 10% or greater	Unacceptable performance degradation
MEDIUM	Material change that affects users	Major slip in key milestone or an impact on critical path.	7-9%	Serious performance degradation that affects users
		Minor slip in key milestone. Slippages of 5% behind schedule are reported in the IPOR.	5-6.9%	Minor performance degradation – no margin remaining
LOW	Absorbable; no impact on users	No milestone slips – workarounds possible and additional resources may be required	2-4.9%	Acceptable with some reduction in performance margin
		Minimal impact, possible slip of non-critical activities	Minimal impact (< 2%)	Possible reduction in performance margin

2) Assign a probability rating to the risk

Determine the likelihood of the risk occurring using the following criteria:

- **High** if the risk is considered almost certain to occur or very likely to occur
- **Medium** if the risk has a 50/50 chance of occurring or “may occur”
- **Low** if the risk is considered unlikely to occur

3) Determine the risk exposure from the matrix below

Risk exposure is derived from the risk attributes of impact and probability, and is used in conjunction with the time frame attribute to prioritize risks for mitigation and escalation. Exhibit 5-3 shows risk exposure for each.

Exhibit 5-3: Risk Exposure Matrix

		PROBABILITY RATING			
		HIGH	MEDIUM	LOW	
IMPACT	HIGH	<i>High</i>	<i>High</i>	<i>Medium</i>	<i>E x p o s u r e</i>
	MEDIUM	<i>High</i>	<i>Medium</i>	<i>Low</i>	
	LOW	<i>Medium</i>	<i>Low</i>	<i>Low</i>	

4) Assign time frame

Determine the time frame within which action must be taken to successfully mitigate the risk using the following criteria:

- **Short** if the time frame is less than six months
- **Medium** if the time frame is six months to one year
- **Long** if the time frame is greater than one year

5) Determine the risk severity from the matrix below

Risk severity is a function of exposure and time frame as identified in Exhibit 5-4 and is used to determine the relative priority of identified risks.

Exhibit 5-4: Risk Severity Matrix

		EXPOSURE RATING			S e v e r i t y
		HIGH	MEDIUM	LOW	
TIME FRAME	SHORT	<i>High</i>	<i>High</i>	<i>Medium</i>	
	MEDIUM	<i>High</i>	<i>Medium</i>	<i>Low</i>	
	LONG	<i>Medium</i>	<i>Low</i>	<i>Low</i>	

5.1.2 Risk Identification

A risk is an uncertain event or condition that, if it occurs, has a positive or a negative effect on at least one project objective, such as scope, budget, schedule, or quality. A risk may have one or more causes, and if it occurs, one or more impacts. A risk may be within or beyond the control or influence of the project team. Risks need to be understood, evaluated, responded to, and monitored. Risks may be:

- Global – Potentially occurring any time in the project lifecycle
- Task related – Related only to a task or deliverable but ceasing after completion of the task/deliverable
- Enterprise related – Related to the administrative or political context of the SOS or to state IT management or budgeting processes. These are often cyclical in nature.

Risk Identification was initiated using the ITPOF and CA-PMM risk categories to brainstorm risks by category. Once the SI vendor begins work, the SOS and SI vendor will agree upon common standards and tools to identify, mitigate, and manage risks. Prior to the start of the development phase, a risk identification and planning session with the SI vendor will be conducted to re-baseline risks to reflect current project conditions and the specifics of the VoteCal solution.

As new risks are identified during the life of the project, they will be analyzed as described below. The Project Manager will convene a risk review meeting at least monthly to discuss newly identified risks and ongoing risk management efforts. This meeting may be held jointly with the SI vendor’s Project Manager and key staff when appropriate to the identified risk.

Any project team member or stakeholder can identify a risk and should use the Risk/Issue Intake Form (Exhibit 5-5) to do so.

The Project Manager will provide this form to the stakeholder identifying the risk to record characteristics of the potential risk. The form will also be available on the VoteCal project web site so that county elections officials and their staff have access to it.

Exhibit 5-5: Risk/Issue Intake Form

Risk/Issue Intake Form			
Originator:	Date:	Phone:	e-mail:
Risk Title:			
Assigned to:		Report Date:	
Risk Assessment			
<p>Risk Statement: <i>Briefly explain the concern, likelihood of it happening, and consequence if it happens. Include the context in which this risk may occur. Check here if you will be attaching or sending additional information separately.</i></p>			
<p>Check one: <input type="checkbox"/> This is happening NOW <input type="checkbox"/> This hasn't happened yet, but it MIGHT happen</p>			
<p>Urgency: <i>When must this be addressed? (e.g. within 2 business days, before end of project phase, etc.)</i></p>			
<p>Impact: <i>Describe the impact on the project if this concern is not addressed timely. Impact is generally understood in terms of project scope, schedule, budget, staffing, or SOS policy/politics.</i></p>			
<p><i>Please do not write below this line. For VoteCal Project Manager input only.</i></p>			
Probability:	Impact:	Time Frame:	Severity:
Assigned to:		Report Date:	
Risk Planning			
<p>Strategy:</p> <p><input type="checkbox"/> Research</p> <p><input type="checkbox"/> Accept</p> <p><input type="checkbox"/> Mitigate</p> <p><input type="checkbox"/> Watch</p>	Action Items		
Risk Tracking			
Event/Action/Commitment:			
Risk Resolution			
Sign-off:	Sign-off:	Sign-off:	
Sign-off Date:	Sign-off Date:	Sign-off Date:	

Information from the Intake Forms will be entered into the Risk Tracking Database by the Project Manager. Written analyses, recommendations, executive directives, and policy papers related to risks will be archived in the project library.

The Project Manager maintains the Risk Tracking Database, which is stored in the project library. A Risk Log will be produced as a point-in-time product that the Risk Management Team, the Project Manager, and the Project Director will use for deliberation and reporting purposes. These Risk Logs will be archived in the project library.

5.1.3 Risk Analysis and Quantification

See section 5.1.1.

5.1.4 Risk Prioritization

Risk prioritization will be based on risk severity and will conform to the following guidelines:

Low-Risk Severity: The Project Manager and/or the SI vendor's Project Manager will generally handle risk assessment and management. The Project Manager may choose to escalate the handling of a particular risk to the Project Director.

Medium-Risk Severity: After initial assessment, the Project Manager will escalate the risk and response recommendations to the Project Director at their next scheduled meeting, and the Project Director may escalate to the Project Sponsor (for potential escalation to the ESC) within two business days.

High-Risk Severity: After initial assessment, the Project Manager will escalate the risk to the Project Director within two business days. The Project Director will escalate the risk to the Project Sponsor with response recommendations within two business days. Upon notification, the Project Sponsor will inform the OCIO within 15 calendar days of determination that a risk is categorized as high severity. The Project Sponsor at her discretion may convene an ESC meeting to address the risk and/or its proposed mitigation approach.

Based on risk analysis, each risk will be prioritized and ranked. Generally, those risks with a high severity level will receive the greatest degree of attention and the greatest priority for resource allocation from the project team. If resources are constrained, prevention, mitigation, and contingency actions are weighed against other assigned project tasks and scheduled appropriately.

Since risk severity, relative priorities, and response options may change as the project progresses, risk ranking will be reviewed and updated during regularly scheduled risk management meetings. All risks being managed by the project will receive an assigned owner who is responsible for monitoring change and reporting status. The risk owner provides a status update to the Project Manager on request or prior to the scheduled risk management meeting.

5.1.5 Risk Response

As the project proceeds and risks emerge, appropriate risk response actions will be defined, confirmed, and implemented. Risks with high probability and impact are most likely to require development of a risk response plan. A risk response plan generally will not be developed for risks that fall into the low-severity category, although the assigned risk owner will continue to monitor changes in these risks.

If there is nothing that can be done to avoid or mitigate a high risk at either the project or ESC level, the risk will be accepted and a contingency plan will be developed with appropriate

actions posted into the project schedule. Additional adjustments may be made to the project budget, resourcing, or communications strategy, with notice to control agencies as appropriate.

The Project Manager will review risks that fall into the medium-risk category on a case-by-case basis. The Project Manager will decide whether to defer potential action at the time the risk is identified, directing the risk owner to simply watch and report on the risk, or whether to expend the resources to develop a risk response plan. As appropriate, the Project Manager will post response actions into the project schedule. Additional adjustments may be made to the project budget, resourcing, or communications strategy. The Project Manager or Project Director may determine that a contingency plan is needed to effectively manage a medium-level risk.

The following are potential risk response options:

- **Acceptance** – risks for which no action is within the influence or control of the project and for which responses cannot be anticipated or planned in advance.
- **Avoidance** – actions that if executed soon enough will prevent the risk from occurring.
- **Mitigation** – actions that will lessen the likelihood of occurrence or impact of the risk on the project
- **Contingency** – actions taken especially to address risk and minimize adverse consequences that are executed once the risk has occurred.

Risks may present opportunities as well as threats. Choosing to pursue opportunities must receive careful consideration because opportunities may represent scope expansion, resource reallocation, schedule adjustment, and increased costs in exchange for the emergent business value. Consequently, the risk response categories below apply equally to threats and opportunities.

During risk evaluation, the Risk Management Team discusses the nature of the risk, its potential impact on the project, and the response options available to the project. Based on this determination, actions are selected, resourced, scheduled, and implemented, and outcomes are monitored.

5.1.6 Risk Avoidance

When appropriate, avoidance actions will be taken to eliminate the chances of a risk occurring. Examples include:

- Clarifying or changing requirements
- Improving communication
- Acquiring expertise
- Reducing project scope to eliminate risk areas

5.1.7 Risk Acceptance

Risk acceptance is an informed decision. The risk is analyzed and a determination is made by the Risk Management Team that:

- there are no *preventative* actions available to decrease the likelihood the risk will occur; and
- should the risk condition emerge, no actions can be anticipated to lessen the impact on the project.

If the risk is accepted, the Risk Management Team will document the acceptance and monitor the risk. Acceptance retains the risk within the risk management monitoring process for change in risk status.

5.1.8 Risk Mitigation

For risks that cannot be avoided, additional mitigating actions will be implemented to lessen the likelihood the risk will occur and/or lessen the impact of the risk occurrence on the project.

Examples of mitigating measures include:

- Supplemental planning or monitoring activities
- Introduction of new tasks or changes in dependency relationships among tasks
- Changes to number or skills of task participants
- Changes to the type, frequency or reporting of status data
- Purchase of additional hardware or software
- Addition of external resources or consultants

The project has already employed four important risk mitigation strategies:

- 1) Contracting for external project management, independent verification and validation, and IPOC services.
- 2) Including in the project schedule elections cycles, which prevent changes to the network.
- 3) Establishing an ESC to sustain executive sponsorship and involvement.
- 4) Establishing a regular, formal risk management process.

Mitigation activities become scheduled, resourced, and managed project tasks. The severity of the risk will determine the sophistication level of the planned mitigation activities. Mitigated risks receive continued monitoring until the risk ceases to impact the project.

5.1.9 Risk Sharing

The VoteCal Project Manager will share the risks associated with developing the primary system component, remediation/replacement of EMSs, and the integration of the VoteCal database with the EMSs with the relevant contractors through integration with the risk management processes.

5.2 Risk Tracking and Control

5.2.1 Risk Tracking

During the life of the project, new risks will emerge and need to be addressed, and known risks and associated actions will need to be monitored. A Risk Intake Form will be used to capture pertinent information. The Project Manager will convene a Risk Management Team meeting at least monthly to discuss newly identified risks and ongoing risk management efforts. This meeting may be held jointly with the SI vendor's Project Manager and key staff for collaboratively managed risks.

Once the Risk Management Team has determined an identified potential risk is indeed a project risk, the Project Manager will enter it into the Risk Tracking Database, which is an Access database created for the project. A Risk Log will be derived from database data.

During the Risk Management Team meetings, the assigned risk owner will provide the status of risk-related activities.

The Risk Tracking Database will be the principal repository of risk escalation history. The Project Manager is responsible for obtaining the update/status information from escalation meetings and recording it into the database.

Risk description, rating, and status for high-severity risks are reported monthly by the Project Manager in the Project Manager's Monthly Project Status Report when briefing the IPOC. Risk-related information may also be used by Project Director to brief the ESC. Customized reports may be developed for this purpose.

Any risk activities (monitoring, analysis, risk mitigation plan development, mitigation, or contingency actions, status reporting) that consume significant staff resources or require coordination will be placed on the project schedule. The Project Manager, in consultation with the Project Management Team and the SI vendor Project Manager, will determine what constitutes significant resources or coordination effort.

Status monitoring and reporting activities that are inclusive to risk management meetings and do not result in significant redirection of staff resources will be absorbed by project staff and included in the schedule's resource allocation for risk management meetings.

5.2.2 Risk Control

The risk owner will provide the Project Manager with the outcome of the intervention. At the next Risk Management Team meeting, the risk owner will summarize the status of the risk, and the team will determine whether the risk has been eliminated or if additional monitoring or follow-up actions are required. If the risk has been eliminated, the Project Manager will mark the risk "retired" on the Risk Log and update the database to show the change in status after the meeting. The risk owner will ensure all materials related to the risk response have been provided to the Project Manager for archive in the project library. At the Project Manager's discretion, a risk that has been retired may be reopened rather than entering a new but similar risk into the database. In the case of reemerging risks, analyses should include why the item was not fully resolved the first time and the likelihood interventions exist that would permanently resolve the risk. Risks of a cyclical nature (such as those dependent on legislative or budget cycles) may be retired and reopened on a cyclical basis if the nature of the risk is well understood. Otherwise, if a previously retired item has remained retired for six months, a new risk will be opened.

6.0 ECONOMIC ANALYSIS WORKSHEETS

EXISTING SYSTEM/BASELINE COST WORKSHEET

Department: Secretary of State

All costs to be shown in whole (unrounded) dollars.

Date Prepared: 06/23/09

Project: VoteCal

	FY 2006/07		FY 2007/08		FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		FY 2012/13		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
Continuing Information																
Technology Costs																
Staff (salaries & benefits)	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	11.2	958,558
Hardware Lease/Maintenance		161,157		161,157		161,157		161,157		161,157		161,157		161,157		1,128,099
Software Maintenance/Licenses		250,459		250,459		250,459		250,459		250,459		250,459		250,459		1,753,213
Contract Services		32,391		32,391		32,391		32,391		32,391		32,391		32,391		226,737
Data Center Services		466,000		466,000		466,000		466,000		466,000		466,000		466,000		3,262,000
Agency Facilities		0		0		0		0		0		0		0		0
Other - Fixed Costs		17,111		17,111		17,111		17,111		17,111		17,111		17,111		119,777
Total IT Costs	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	11.2	7,448,384
Continuing Program Costs:																
Personal Services	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	203.0	18,221,000
Other - OE&E		371,000		371,000		371,000		371,000		371,000		371,000		371,000		2,597,000
Other - SIE		\$8,959,000		\$8,959,000		\$8,959,000		\$8,959,000		\$8,959,000		\$8,959,000		\$8,959,000		62,713,000
Total Program Costs	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	203.0	83,531,000
TOTAL EXISTING SYSTEM COSTS	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	214.2	90,979,384

Assumptions:

Baseline Costs only include those related to Calvoter, not to the County Voter Registration/Election Management Systems

Staffing and associated salaries are assumed to remain constant.

Continuing Information Technology Costs are assumed to remain constant.

PROPOSED ALTERNATIVE: Hybrid Voter Registration System - Catalyst

Date Prepared: 06/23/09

Department: Secretary of State
Project: VoteCal

All Costs Should be shown in whole (unrounded) dollars.

	FY 2006/07		FY 2007/08		FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		FY 2012/13		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs¹																
Staff (Salaries & Benefits) ²	0.9	67,890	2.2	223,187	3.5	401,879	11.8	1,254,758	15.8	1,493,904	15.8	1,493,904	0.0	0	49.9	4,935,522
Hardware Purchase	0	0	0	0	0	0	0	32,000	0	0	0	0	0	0	0	32,000
Software Purchase/License	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Telecommunications	0	0	0	0	0	0	0	12,000	0	0	0	0	0	0	0	12,000
Contract Services																
Software Customization	0	0	0	0	0	0	0	1,701,368	0	9,668,346	0	6,807,286	0	0	0	18,177,000
Project Management	172,040	172,040	305,880	305,880	307,280	307,280	320,640	320,640	320,640	320,640	320,641	320,641	0	0	0	1,747,121
Project Oversight	108,806	108,806	224,624	224,624	193,639	193,639	281,350	281,350	319,358	319,358	220,081	220,081	0	0	0	1,347,858
IV&V Services	15,626	15,626	118,379	118,379	104,496	104,496	431,414	431,414	383,155	383,155	100,014	100,014	0	0	0	1,153,084
Other Contract Services	16,200	16,200	302,015	302,015	315,650	315,650	690,568	690,568	7,066,400	7,066,400	358,200	358,200	0	0	0	8,749,033
TOTAL Contract Services	312,672	312,672	950,898	950,898	921,065	921,065	3,425,340	3,425,340	17,757,899	17,757,899	7,806,222	7,806,222	0	0	0	31,174,096
Data Center Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agency Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	\$0	\$0	\$16,000	\$16,000	\$26,000	\$26,000	\$416,312	\$416,312	\$2,052,384	\$2,052,384	\$2,578,420	\$2,578,420	\$0	\$0	0	5,089,116
Total One-time IT Costs	0.9	380,562	2.2	1,190,085	3.5	1,348,944	11.8	5,140,410	15.8	21,304,187	15.8	11,878,546	0.0	0	49.9	41,242,734
Continuing IT Project Costs																
Staff (Salaries & Benefits)	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	15.8	1,493,904	15.8	1,493,904
Hardware Lease/Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	481,000	0	481,000
Software Maintenance/Licenses	0	0	0	0	0	0	0	4,416	0	14,211	0	14,211	0	839,211	0	872,049
Telecommunications	0	0	0	0	0	0	0	442,536	0	442,536	0	442,536	0	442,536	0	1,770,144
Contract Services	0	0	0	0	0	0	0	0	0	26,384	0	26,384	0	26,384	0	79,152
Data Center Services	0	0	0	0	0	0	0	15,000	0	30,000	0	30,000	0	30,000	0	105,000
Agency Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OE&E	0	0	0	0	0	0	0	0	0	0	0	0	0	79,000	0	79,000
ICRP & SWCAP	0	0	0	0	0	0	0	853,235	0	1,015,854	0	1,015,854	0	1,015,854	0	3,900,797
Other - Training	0	0	0	0	0	0	0	0	0	0	0	0	0	10,000	0	10,000
Other - External Agency Interface Maintenance	0	0	0	0	0	0	0	0	0	362,995	0	362,995	0	362,995	0	1,088,985
Total Continuing IT Costs	0.0	0	0.0	0	0.0	0	0.0	1,315,187	0.0	1,891,980	0.0	1,891,980	15.8	4,780,884	15.8	9,880,031
Total Project Costs	0.9	380,562	2.2	1,190,085	3.5	1,348,944	11.8	6,455,597	15.8	23,196,167	15.8	13,770,526	15.8	4,780,884	65.7	51,122,765
Continuing Existing Costs																
Information Technology Staff	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	1.6	136,937	11.2	958,558
Other IT Costs	927,118	927,118	927,118	927,118	927,118	927,118	927,118	927,118	927,118	927,118	927,118	927,118	473,126	473,126	0	6,035,834
Total Continuing Existing IT Costs	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	610,063	11.2	6,994,391
Program Staff	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	29.0	2,603,000	203.0	18,221,000
Other Program Costs	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	9,330,000	8,876,008	8,876,008	0	64,856,008
Total Continuing Existing Program Costs	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,479,008	203.0	83,077,008
Total Continuing Existing Costs	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,089,070	214.2	90,071,399
TOTAL ALTERNATIVE COSTS	31.5	13,377,617	32.8	14,187,140	34.1	14,345,999	42.4	19,452,651	46.4	36,193,222	46.4	26,767,581	46.4	16,869,954	279.9	141,194,164
INCREASED REVENUES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 - See Alt P - cost detail worksheet

2 See Alt P - staff detail worksheet

ALTERNATIVE #1: NA

Date Prepared: 06/23/09

Department: Secretary of State
 Project: VoteCal

All Costs Should be shown in whole (unrounded) dollars.

	FY 2006/07		FY 2007/08		FY 2008/09		FY 2011/12		FY 2012/13		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs												
Staff (Salaries & Benefits)											0.0	0
Hardware Purchase												0
Software Purchase/License												0
Telecommunications												0
Contract Services												
Software Customization												0
Project Management												0
Project Oversight												0
IV&V Services												0
Other Contract Services												0
TOTAL Contract Services												0
Data Center Services												0
Agency Facilities												0
Other - Training and Advisory Committee Travel Costs												0
Total One-time IT Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Continuing IT Project Costs												
Staff (Salaries & Benefits)											0.0	0
Hardware Lease/Maintenance												0
Software Maintenance/Licenses												0
Telecommunications												0
Contract Services												0
Data Center Services												0
Agency Facilities												0
Other - Training												0
Other - External Agency Interface Maintenance												0
Total Continuing IT Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Project Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Continuing Existing Costs												
Information Technology Staff											0.0	0
Other IT Costs												0
Total Continuing Existing IT Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Program Staff											0.0	0
Other Program Costs												0
Total Continuing Existing Program Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Continuing Existing Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
TOTAL ALTERNATIVE COSTS	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
INCREASED REVENUES		0		0		0		0		0		0

ECONOMIC ANALYSIS SUMMARY

Date Prepared: 06/23/09

Department: Secretary of State
Project: VoteCal

All costs to be shown in whole (unrounded) dollars.

	FY 2006/07		FY 2007/08		FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		FY 2012/13		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
EXISTING SYSTEM																
Total IT Costs	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	1.6	1,064,055	11.2	7,448,384
Total Program Costs	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	29.0	11,933,000	203.0	83,531,000
Total Existing System Costs	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	214.2	90,979,384
PROPOSED ALTERNATIVE	Hybrid Voter Registration System - Catalyst															
Total Project Costs	0.9	380,562	2.2	1,190,085	3.5	1,348,944	11.8	6,455,597	15.8	23,196,167	15.8	13,770,526	15.8	4,780,884	65.7	51,122,765
Total Cont. Exist. Costs	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,997,055	30.6	12,089,070	214.2	90,071,399
Total Alternative Costs	31.5	13,377,617	32.8	14,187,140	34.1	14,345,999	42.4	19,452,651	46.4	36,193,222	46.4	26,767,581	46.4	16,869,954	279.9	141,194,164
COST SAVINGS/AVOIDANCES	(0.9)	(380,562)	(2.2)	(1,190,085)	(3.5)	(1,348,944)	(11.8)	(6,455,597)	(15.8)	(23,196,167)	(15.8)	(13,770,526)	(15.8)	(3,872,900)	(65.7)	(50,214,781)
Increased Revenues		0		0		0		0		0		0		0		0
Net (Cost) or Benefit	(0.9)	(380,562)	(2.2)	(1,190,085)	(3.5)	(1,348,944)	(11.8)	(6,455,597)	(15.8)	(23,196,167)	(15.8)	(13,770,526)	(15.8)	(3,872,900)	(65.7)	(50,214,781)
Cum. Net (Cost) or Benefit	(0.9)	(380,562)	(3.1)	(1,570,647)	(6.5)	(2,919,591)	(18.3)	(9,375,188)	(34.1)	(32,571,355)	(49.9)	(46,341,881)	(65.7)	(50,214,781)		
ALTERNATIVE #1	NA															
Total Project Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Cont. Exist. Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Alternative Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
COST SAVINGS/AVOIDANCES	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Increased Revenues		0		0		0		0		0		0		0		0
Net (Cost) or Benefit	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Cum. Net (Cost) or Benefit	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0		

PROJECT FUNDING PLAN

Department: Secretary of State

All Costs to be in whole (unrounded) dollars

Date Prepared: 06/23/09

Project: VoteCal

	FY 2006/07		FY 2007/08		FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		FY 2012/13		TOTALS	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
TOTAL PROJECT COSTS	0.9	380,562	2.2	1,190,085	3.5	1,348,944	11.8	6,455,597	15.8	23,196,167	15.8	13,770,526	15.8	4,780,884	65.7	51,122,765
RESOURCES TO BE REDIRECTED																
Staff (Refer to Note 1)	0.9	67,890	1.2	123,720	1.3	188,012	3.8	478,748	3.8	478,748	3.8	478,748	3.8	478,748	18.6	2,294,614
Funds:																
Existing System		0		0		0		0		0		0		0		0
Other Fund Sources		0		0		0		0		0		0		0		0
TOTAL REDIRECTED RESOURCES	0.9	67,890	1.2	123,720	1.3	188,012	3.8	478,748	3.8	478,748	3.8	478,748	3.8	478,748	18.6	2,294,614
ADDITIONAL PROJECT FUNDING NEEDED																
One-Time Project Costs	0.0	312,672	1.0	1,066,365	2.2	1,160,932	8.0	4,661,662	12.0	20,825,439	12.0	11,399,798	0.0	0	35.2	39,426,868
Continuing Project Costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,315,187	0.0	1,891,980	0.0	1,891,980	12.0	4,302,136	12.0	9,401,283
TOTAL ADDITIONAL PROJECT FUNDS NEEDED BY FISCAL YEAR (Refer to Note 2)	0.0	312,672	1.0	1,066,365	2.2	1,160,932	8.0	5,976,849	12.0	22,717,419	12.0	13,291,778	12.0	4,302,136	47.2	48,828,151
TOTAL PROJECT FUNDING	0.9	380,562	2.2	1,190,085	3.5	1,348,944	11.8	6,455,597	15.8	23,196,167	15.8	13,770,526	15.8	4,780,884	65.7	51,122,765
Difference: Funding - Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Estimated Cost Savings	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0

Note 1: Although the Staff is being redirected, Federal dollars will be used to fund these staff costs.

Note 2: This line calculates the amount of Federal Funds required less the costs associated with redirected staff.
The total amount of Federal Funds required will exactly match the "Total Project Funding" line.

**ADJUSTMENTS, SAVINGS AND REVENUES WORKSHEET
(DOF Use Only)**

Department: Secretary of State
Project: VoteCal

Date Prepared: 06/23/09

Annual Project Adjustments	FY 2006/07		FY 2007/08		FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		FY 2012/13		Net Adjustments	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-time Costs																
Previous Year's Baseline	0.0	0	0.0	312,672	1.0	1,066,365	2.2	1,160,932	8.0	4,661,662	12.0	1,160,932	12.0	11,399,798		
(A) Annual Augmentation /(Reduction)	0.0	312,672	1.0	753,693	1.2	94,567	5.8	3,500,730	4.0	16,163,778	0.0	10,238,866	(12.0)	(11,399,798)		
(B) Total One-Time Budget Actions	0.0	312,672	1.0	1,066,365	2.2	1,160,932	8.0	4,661,662	12.0	20,825,439	12.0	11,399,798	0.0	0	35.2	39,426,868
Continuing Costs																
Previous Year's Baseline	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1,315,187	0.0	0	0.0	1,891,980		
(C) Annual Augmentation /(Reduction)	0.0	0	0.0	0	0.0	0	0.0	1,315,187	0.0	576,793	0.0	1,891,980	12.0	2,410,156		
(D) Total Continuing Budget Actions	0.0	0	0.0	0	0.0	0	0.0	1,315,187	0.0	1,891,980	0.0	1,891,980	12.0	4,302,136	12.0	9,401,283
Total Annual Project Budget Augmentation /(Reduction) [A + C]	0.0	312,672	1.0	753,693	1.2	94,567	5.8	4,815,917	4.0	16,740,571	0.0	12,130,846	0.0	(8,989,642)		

[A, C] Excludes Redirected Resources

Total Additional Project Funds Needed [B + D]

47.2 48,828,151

Annual Savings/Revenue Adjustments

Cost Savings	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0		
Increased Program Revenues		0		0		0		0		0		0		0		

Alt (P) Cost Detail

Item	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	Total
ONE-TIME IT PROJECT COSTS	\$312,672	\$966,898	\$947,065	\$3,885,652	\$19,810,283	\$10,384,642	\$0	\$35,581,222
Hardware Purchase	\$0	\$0	\$0	\$32,000	\$0	\$0	\$0	\$32,000
Developer workstations ¹				\$32,000				\$32,000
Software Purchase/License	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Telecommunications²	\$0	\$0	\$0	\$12,000	\$0	\$0	\$0	\$12,000
Contract Services	\$0	\$0	\$0	\$1,701,368	\$9,668,346	\$6,807,288	\$0	\$18,177,000
Software Customization				\$1,701,368	\$9,668,346	\$6,807,288		\$18,177,000
SI Vendor				\$1,701,368	\$9,668,346	\$6,807,288		\$18,177,000
Project Management	\$172,040	\$305,880	\$307,280	\$320,640	\$320,640	\$320,641	\$0	\$1,747,121
Project Oversight ³	\$108,806	\$224,624	\$193,639	\$281,350	\$319,358	\$220,081	\$0	\$1,347,858
IV&V ⁴	\$15,626	\$118,379	\$104,496	\$431,414	\$383,155	\$100,014	\$0	\$1,153,084
Other Contract Services	\$16,200	\$302,015	\$315,650	\$690,568	\$7,066,400	\$358,200	\$0	\$8,749,033
EMS Remediation and County Migration ⁵					\$6,300,000			\$6,300,000
Procurement Support ⁶	\$16,200	\$121,635	\$140,930	\$100,000				\$378,765
DCS ⁷		\$93,442	\$70,000	\$12,000	\$14,000	\$2,000		\$191,442
Project Assistant		\$86,938	\$104,720	\$110,568	\$88,400	\$44,200		\$344,826
QA Manager				\$234,000	\$312,000	\$156,000		\$702,000
Technical Architect				\$234,000	\$312,000	\$156,000		\$702,000
Independent Security Audit					\$40,000			\$40,000
Data Center Services	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Agency Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$0	\$16,000	\$26,000	\$416,312	\$2,052,384	\$2,578,420	\$0	\$4,363,126
County Participation - JAD sessions ⁸				\$254,344.00				\$254,344
County Participation - VoteCal and EMS data conv. & Imp ⁹					\$1,349,460	\$1,349,460		\$2,698,920
County Participation - VoteCal and EMS training ¹⁰					\$180,805	\$723,221		\$904,026
SOS Costs - County Training ¹¹					\$5,499	\$21,995		\$27,494
Training Costs				\$30,000	\$20,000	\$10,000	\$0	\$60,000
IT staff				\$10,000				\$10,000
Program staff				\$20,000	\$20,000	\$10,000		\$50,000
Travel Costs				\$60,968	\$42,625	\$31,749	\$0	\$135,342
Travel Costs - VoteCal Staff ¹²				\$31,749	\$32,886	\$31,749		\$96,384
Network Planning and Installation ¹³				\$29,219	\$9,740			\$38,958
ICRP ¹⁴							\$0	\$0
SWCAP ¹⁵							\$0	\$0
OE&E ¹⁶		\$16,000	\$26,000	\$71,000	\$91,000	\$79,000	\$0	\$283,000
Other - External Agency Interface Maintenance ¹⁷							\$0	\$0
CONTINUING IT PROJECT COSTS	\$0	\$0	\$0	\$1,315,187	\$1,891,980	\$1,891,980	\$3,296,680	\$8,395,827
Hardware Lease/Maintenance¹⁸	\$0	\$0	\$0	\$0	\$0	\$0	\$481,000	\$481,000
Software Maintenance/Licenses	\$0	\$0	\$0	\$4,416	\$14,211	\$14,211	\$839,211	\$872,049
VoteCal Application					\$9,795	\$9,795	\$825,000	\$854,590
CASS-Certified Address Correction Software ¹⁹					\$9,795	\$9,795		\$19,590
WebEx Meeting Center and Support Center ²⁰				\$4,416	\$4,416	\$4,416		\$13,248
Telecommunications²¹	\$0	\$0	\$0	\$442,536	\$442,536	\$442,536	\$442,536	\$1,770,144
Contract Services	\$0	\$0	\$0	\$0	\$26,384	\$26,384	\$26,384	\$79,152
Web-page language translation					\$26,384	\$26,384	\$26,384	\$79,152
Data Center Services	\$0	\$0	\$0	\$15,000	\$30,000	\$30,000	\$30,000	\$105,000
DTS Data Center Floor Costs COEMS ²²				\$15,000	\$30,000	\$30,000	\$30,000	\$105,000
Agency Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SOS Costs - County Training	\$0	\$0	\$0	\$0	\$0	\$0	\$9,700	\$9,700
Other - Indirect Cost Rate Proposal (ICRP)²³	\$0	\$0	\$0	\$777,950	\$926,220	\$926,220	\$926,220	\$3,556,610
Other - Statewide Cost Allocation Plan (SWCAP)²⁴	\$0	\$0	\$0	\$75,285	\$89,634	\$89,634	\$89,634	\$344,187
Other - OE&E²⁵	\$0	\$0	\$0	\$0	\$0	\$0	\$79,000	\$79,000
Other - Training²⁶	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000	\$10,000
Other - External Agency Interface Maintenance²⁷	\$0	\$0	\$0	\$0	\$362,995	\$362,995	\$362,995	\$1,088,985

- 1 - Based on 4 developers at \$8000/workstation. One-time purchase that will not be used after VoteCal development is complete.
- 2 - Cost detail in "telecomm" worksheet. One-time costs in 09/10. Ongoing in 09/10 and each FY thereafter.
- 3 - Cost detail in "systems integrator" worksheet
- 4 - Costs through FY 08/09 represent actuals. FY 09/10 through end of project represent projection based on actuals and project phase.
- 5 - Cost detail in "county remediation" worksheet
- 6 - Estimated based on a full-time contracted resource at \$150/hr. for 2080 hrs. - contracts in the first year will be approximate 9 months
- 7 - Cost detail in "web trans" worksheet - this is anticipated to be an ongoing expense
- 8 - Estimated level of effort at 400 hrs. at \$100/hr. - specific scope of work in the the SPR
- 9 - High bandwidth communications - Three racks at \$800/month per rack + potential additional electrical costs starts Jan 2010
- 10 - Cost detail in worksheet "county jad"
- 11 - Cost detail in worksheet "county data conversion and imp"
- 12 - Cost detail in worksheet "county training"
- 13 - Cost detail in worksheet "SOS - county training"
- 14 - Network staff training - two resources at \$5000 each
- 15 - Cost detail in worksheet "SOS staff travel & training"
- 16 - Cost detail in worksheet "IT - travel - network planning"
- 17 - ICRP costs based on SOS formula
- 18 - SWCAP costs based on Department of Finance formula. These payments end when federal funds end.
- 19 - OE&E calculations in worksheet "Alt P - staff detail"
- 20 - Annual hardware maintenance contract option from System Integrator proposal (There are no separate one-time hardware purchases for the VoteCal system as the vendor bid a solution that includes hardware)
- 21 - Assumes unlimited hits and LAN server license for AccuMail Gold
- 22 - Based on 12 licenses for WebEx Meeting Center and Support Center
- 23 - See "External Interface" worksheet
- 24 - Cell 20E Based on 20% cost for HW/SW/Telecomm procurement + \$200/ contract review for each of 40 contracts, Cell 20F based on 70 contract reviews @ \$200 each, and Cell 20G based on 10 contract reviews @ \$200 each

ALT P – STAFF DETAIL

VoteCal Dedicated and Redirected Staff									
Dedicated Staff									
#		Classification	Monthly Salary	Max Annual Salary	Minus 5%	Benefits (38.08%)	Loaded PY Cost	OE&E (yr 1)	OE&E (yr 2+)
1	FY 07/08	AGPA (Communications Lead)	\$ 5,348.00	\$64,176.00	\$3,209.00	\$24,438.00	\$85,405.00	\$8,000.00	\$5,000.00
1	FY 07/08	Senior ISA (Contract Support)	\$ 7,109.00	\$85,308.00	\$4,265.00	\$32,485.00	\$113,528.00	\$8,000.00	\$5,000.00
1	FY 08/09	SSA/AGPA (Data Analysis & Reporting)	\$ 5,348.00	\$64,176.00	\$3,209.00	\$24,438.00	\$85,405.00	\$8,000.00	\$5,000.00
1	FY 08/09	AGPA/ES (System Admin/Help Desk Lead)	\$ 5,874.00	\$70,488.00	\$3,524.00	\$26,842.00	\$93,806.00	\$8,000.00	\$5,000.00
1	FY 09/10	SSA/AGPA (Training Coordinator)	\$ 5,348.00	\$64,176.00	\$3,209.00	\$24,438.00	\$85,405.00	\$8,000.00	\$5,000.00
1	FY 10/11	SSA/AGPA (Monitoring & Compliance)	\$ 5,348.00	\$64,176.00	\$3,209.00	\$24,438.00	\$85,405.00	\$8,000.00	\$5,000.00
1	FY 09/10	SSA/AGPA (Help Desk & User Support)*	\$ 5,348.00	\$64,176.00	\$3,209.00	\$24,438.00	\$85,405.00	\$8,000.00	\$5,000.00
1	FY10/11	PTII (Help Desk & User Support)	\$ 3,209.00	\$38,508.00	\$1,925.00	\$14,664.00	\$51,247.00	\$8,000.00	\$5,000.00
1	FY 10/11	PTII (Help Desk & User Support)	\$ 3,209.00	\$38,508.00	\$1,925.00	\$14,664.00	\$51,247.00	\$8,000.00	\$5,000.00
1	FY 10/11	PTII (VR Data Requests Fulfillment)	\$ 3,209.00	\$38,508.00	\$1,925.00	\$14,664.00	\$51,247.00	\$8,000.00	\$5,000.00
1	FY 09/10	SSS II/Senior PA	\$ 7,109.00	\$85,308.00	\$4,265.00	\$32,485.00	\$113,528.00	\$8,000.00	\$5,000.00
1	FY 09/10	SSS II/Senior PA (VoteCal Network Analyst)	\$ 7,109.00	\$85,308.00	\$4,265.00	\$32,485.00	\$113,528.00	\$8,000.00	\$5,000.00
12		*Classification changed to AGPA for recruitment opportunity purposes.		\$762,816.00	\$38,139.00	\$290,479.00	\$1,015,156.00	\$96,000.00	\$60,000.00
Redirected Staff									
0.87	FY 06/07	Various - Actuals from CalStars					\$67,890.00	\$0.00	(OE&E*%PY) \$0.00
1.18	FY 07/08	Various - Actuals from CalStars					\$123,720.00	\$0.00	\$0.00
1.30	FY 08/09	Various - Actuals from CalStars + projections for June 2009					\$188,012.00	\$0.00	\$0.00
0.9	FY 09/10	SOS CIO	\$ 9,666.00	\$104,393.00	\$5,220.00	\$39,753.00	\$138,926.00	\$0.00	\$4,500.00
0.5	FY 09/10	Deputy SOS, HAVA Activities	\$ 10,549.00	\$63,294.00	\$3,165.00	\$24,102.00	\$84,231.00	\$0.00	\$2,500.00
0.5	FY 09/10	Accounting Officer (Specialist)	\$ 4,670.00	\$28,020.00	\$1,401.00	\$10,670.00	\$37,289.00	\$0.00	\$2,500.00
0.3	FY 09/10	AGPA/ES (Administrative)	\$ 5,874.00	\$21,146.00	\$1,057.00	\$8,052.00	\$28,141.00	\$0.00	\$1,500.00
1	FY 09/10	Senior ISA (Program/Technical Support)	\$ 7,109.00	\$85,308.00	\$4,265.00	\$32,485.00	\$113,528.00	\$0.00	\$5,000.00
0.1	FY 09/10	System Software Specialist III-Tech	\$ 7,796.00	\$9,355.00	\$468.00	\$3,562.00	\$12,449.00	\$0.00	\$500.00
0.25	FY 09/10	DP Manager III	\$ 8,239.00	\$24,717.00	\$1,236.00	\$9,412.00	\$32,893.00	\$0.00	\$1,250.00
0.15	FY 09/10	Chief, Information Technology Division	\$ 8,616.00	\$15,509.00	\$775.00	\$5,906.00	\$20,640.00	\$0.00	\$750.00
0.05	FY 09/10	Sr Program Analyst (Sup)	\$ 7,465.00	\$4,479.00	\$224.00	\$1,706.00	\$5,961.00	\$0.00	\$250.00
0.05	FY 09/10	AGPA/ES (Knowledge transfer)	\$ 5,874.00	\$3,524.00	\$176.00	\$1,342.00	\$4,690.00	\$0.00	\$250.00
7.15		Note: Projection for redirected staff is based on actual expenses to date, changing project needs going forward, and overhead we had not previously charged to VoteCal.		\$359,745.00	\$17,987.00	\$136,990.00	\$858,370.00	\$0.00	\$19,000.00
Sum of Redirected and New Staff Costs				\$1,122,561.00	\$56,126.00	\$427,469.00	\$1,873,526.00	\$96,000.00	\$79,000.00

ALT P – STAFF DETAIL

Distribution of PY Cost by Fiscal Year			FY 06/07		FY 07/08		FY 08/09		FY 09/10		FY 10/11		FY 11/12		FY 12/13		
		Fully Loaded PY Cost	PYs	Salary	PYs	Salary	PYs	Salary	PYs	Salary	PYs	Salary	PYs	Salary	PYs	Salary	
1	FY 07/08	AGPA (Communications Lead)			0.5	\$42,703.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	
1	FY 07/08	Senior ISA (Contract Support)			0.5	\$56,764.00	1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	
1	FY 08/09	SSA/AGPA (Data Analysis & Reporting)					0.08	\$7,117.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	
1	FY 08/09	AGPA/ES (System Admin/Help Desk Lead)					0.08	\$7,817.00	1	\$93,806.00	1	\$93,806.00	1	\$93,806.00	1	\$93,806.00	
1	FY 09/10	SSA/AGPA (Training Coordinator)							1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	
1	FY 10/11	SSA/AGPA (Monitoring & Compliance)									1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	
1	FY 09/10	SSA/AGPA (Help Desk & User Support)*							1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	1	\$85,405.00	
1	FY 10/11	PTII (Help Desk & User Support)									1	\$51,247.00	1	\$51,247.00	1	\$51,247.00	
1	FY 10/11	PTII (Help Desk & User Support)									1	\$51,247.00	1	\$51,247.00	1	\$51,247.00	
1	FY 10/11	PTII (VR Data Requests Fulfillment)									1	\$51,247.00	1	\$51,247.00	1	\$51,247.00	
1	FY 09/10	SSS II/Senior PA							1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	
1	FY 09/10	SSS II/Senior PA (VoteCal Network Analyst)							1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	1	\$113,528.00	
0.87	FY 06/07	Various - Actuals from CalStars		0.87	\$67,890.00												
1.18	FY 07/08	Various - Actuals from CalStars				1.18	\$123,720.00										
1.30	FY 08/09	Various - Actuals from CalStars + projections for June 2009						1.3	\$188,012.00								
3.80	FY 09/10 forward	Projected annual redirections								3.80	\$478,748.00	3.80	\$478,748.00	3.80	\$478,748.00	3.80	\$478,748.00
Actual and Projected Cost by Fiscal Year for New and Redirected PYs				0.9	\$67,890	2.2	\$223,187	3.5	\$401,879	11.8	\$1,254,758	15.8	\$1,493,904	15.8	\$1,493,904	15.8	\$1,493,904
Distribution of OE&E Cost by Fiscal Year																	
				FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13								
1	FY 07/08	AGPA (Communications Lead)		\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 07/08	Senior ISA (Contract Support)		\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 08/09	SSA/AGPA (Data Analysis & Reporting)			\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 08/09	AGPA/ES (System Admin/Help Desk Lead)			\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 09/10	SSA/AGPA (Training Coordinator)				\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 10/11	SSA/AGPA (Monitoring & Compliance)					\$8,000.00	\$5,000.00	\$5,000.00								
1	FY 09/10	SSA (Help Desk & User Support)				\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 10/11	PTII (Help Desk & User Support)					\$8,000.00	\$5,000.00	\$5,000.00								
1	FY 10/11	PTII (Help Desk & User Support)					\$8,000.00	\$5,000.00	\$5,000.00								
1	FY 10/11	PTII (VR Data Requests Fulfillment)					\$8,000.00	\$5,000.00	\$5,000.00								
1	FY 09/10	SSS II/Senior PA (Programming Analyst)				\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
1	FY 09/10	SSS II/Senior PA (VoteCal Network Analyst)				\$8,000.00	\$5,000.00	\$5,000.00	\$5,000.00								
12				\$16,000.00	\$26,000.00	\$52,000.00	\$72,000.00	\$60,000.00	\$60,000.00								
Redirected Staff OE&E						\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00								
Total Staff OE&E by Fiscal Year				\$16,000.00	\$26,000.00	\$71,000.00	\$91,000.00	\$79,000.00	\$79,000.00								

APPENDIX A: VOTECAL ARCHITECTURE



VoteCal Application Logical Schematic

