

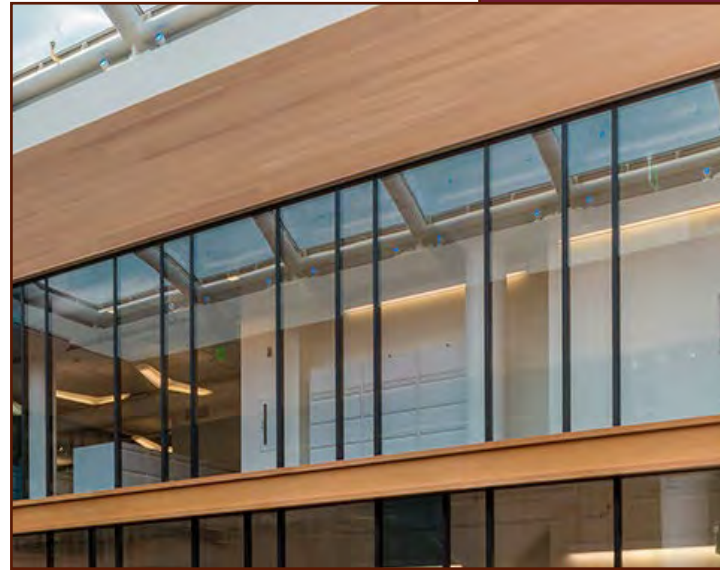


BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

AGENDA: 4

PERFORMANCE AUDIT OF MY AIR ONLINE PRELIMINARY FINDINGS BRIEFING

BY SJOBERG EVASHENK CONSULTING, INC.



AUDIT SCOPE & OBJECTIVES

The performance audit of My Air Online will include an evaluation of:

- Air District's Production System, including evaluating if:
 - The project management approach was consistent with leading practices and transparent, and whether adequate systems were in place to ensure project delivery on time and on budget.
 - The production system meets the needs of the Air District, including whether:
 - System controls are in place to ensure data integrity and reporting capabilities;
 - System usability is effective and efficient, such as automating critical program tasks;
 - System reliability does not require subsidiary and legacy systems or manual processes.
 - System functionality covers the Air District's core needs and protects against any potential loss of functionality if the Air District's legacy systems were to fail or be shut down.
- Total costs associated with maintaining the legacy systems, maintaining and operating the Production System, and developing the Production System.
- Workload and resource trends and contributing factors (staffing, information technology)
- MAO's reliance on third-party service providers.

BACKGROUND

- In 2004, the District began a business process improvement study that led to the inception of the New Production System (NPS) project. In December 2006, the Board approved a project plan for the development of NPS with an initial budget of \$5.6 million and an expected deployment in 2010. The District reported that the initial deployment occurred 2012.
- NPS was initially envisioned to replace two legacy systems, Databank and IRIS; as well as provide enhancements that would allow for improved staff efficiency, enhanced customer experience, and improved consistency of operations.



PRELIMINARY FINDINGS

AIR DISTRICT LACKED CRITICAL CONTROLS AND STRUCTURE NECESSARY TO ENSURE THE PROJECT'S SUCCESS

1

Project records were not maintained detailing how key decisions were made, including information regarding:

- Decisions to switch code bases three times,
- Prioritization of system functionality and improvements, and
- Resource management decisions.

Despite the early adoption of some best practices, the project management approach during most of the project life cycle was lacking. There was limited to no documentation for activities and information, such as:

- Project management plan;
- Project cost controls, such as baseline budget, total project budget, and budget-to-actual reporting;
- Project roadmap and delivery schedule;
- Meaningful project performance and delivery reporting;
- Risk management plan; and
- Core system functionality and expected functionality necessary to achieve project goals.

PRELIMINARY FINDINGS

INSUFFICIENT PROJECT GOVERNANCE, OVERSIGHT, AND TRANSPARENCY



Roles and responsibilities were not clearly defined, leading to gaps in project oversight and direction.

Insufficient management reporting of project progress.

Limited to no design documents, artifacts, and business rules, leading to significant risk of reliance on contractors to maintain and update the system.

Total **capital** project costs first reported to the Board in April 2023 were \$36 million. As of June 2023, additional costs related to the project, including operating costs and salaries and benefits, were approximately \$38 million.

Total project-related expenditures over the past 20 years were significantly less than allocated (\$74 vs \$95 million).



■ Amended Budget ■ Actual Expenditures

*2023 actuals are District provided estimates.

PRELIMINARY FINDINGS

CONTRACTOR OVERSIGHT WAS INSUFFICIENT AND VENDOR CONTRACTS LACKED KEY PROVISIONS



Contracts generally lacked clearly defined deliverables and schedules; contract costs were not tied to deliverables; and did not include warranty periods nor performance metrics or provisions.

Contracts written and managed in a manner where project risks were predominantly borne by the District.

Heavy reliance on contractors and up until recently no plan in place to transfer knowledge from vendors to the District.

The District historically treated contractors as augmented staffing resources and did not effectively plan, prioritize, or monitor contractor workload and performance.

Insufficient contract cost controls employed by the District, as budgets were adjusted annually based on available resources not project workload and overall project delivery.

PRELIMINARY FINDINGS

SYSTEM WILL NOT BE DELIVERED AS INITIALLY ENVISIONED AND WILL REQUIRE ADDITIONAL ENHANCEMENTS



The Air District is unable to provide a comprehensive list of promised system functionality at the project's on-set to system functionality at project completion.

System will include core functionality of legacy systems, process and functionality improvements, and expandability.

Some functionality initially envisioned will not be included.

Several years where project resources were spent re-coding work to new code base.

District prioritized developing functionality enhancements over core functionality that would allow legacy systems to be decommissioned.

- Since July 2014, the District has spent nearly \$9 million maintaining legacy systems.

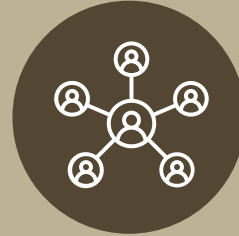
Additional enhancements will be needed to streamline workflows, transfer knowledge, and assess compliance with ADA requirements.

RECENT OBSERVATIONS



STONE AT THE TOP

- Increased priority on completing the project.
- Focus on addressing project failure risks, decommissioning legacy systems, and prioritizing resources.



PROJECT MANAGEMENT

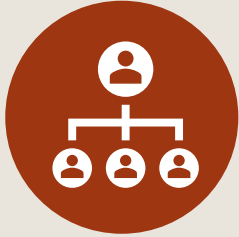
- Focused effort to decommission legacy systems and ensure core functionality.
 - Developing project delivery milestones through June 2024.
- Increased stakeholder engagement and issue resolution process.
- Began working with contractors to incorporate key contract provisions.



DECOMMISSION LEGACY SYSTEMS

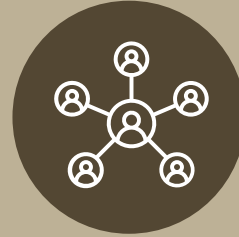
- Transferred legacy system data to NPS and decommissioned Databanks in September 2023.
- Transferring legacy system data to NPS and plan to decommission IRIS in the first quarter of 2024.

KEY RECOMMENDATIONS



Increase project transparency and establish project governance

- Assign IT project oversight to the Chief Technology Officer
- Management reporting to the Board
- Project Oversight by a Board Committee



Implement leading project management practices, such as:

- Cost controls, such as establishing and reporting budget-to-actuals
 - Project schedules
 - Risk management
- Resource management
- Contract management



Eliminate vendor lock-in and complete knowledge transfer

- Document system design
- Onboard or train staff with expertise necessary to maintain system



THANK YOU!



GEORGE@SECTEAM.COM



WWW.SECTEAM.COM



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 5

Status of Decommissioning Legacy Permitting and Enforcement Computer Systems and Request to Recommend Contracts for Replacement Systems

**Finance and Administration Committee Meeting
October 18, 2023**

**John Chiladakis
Chief Technology Officer
Jchiladakis@baaqmd.gov**

Outline



- Audit Work and Immediate Changes
- Status of the Decommissioning of Legacy Systems
- Restructuring and Refocusing Project Teams
- Audit Recommendations: Project Management, Transparency and Oversight, Vendor Lock-in
- Foreword Looking Project Roadmap and Projected Costs
- Request to Recommend Execution of Contracts

Requested Action



Request that the Committee recommend the authorization to execute vendor contracts for the maintenance, operations, development and implementation of permitting and enforcement computer systems not to exceed \$2.65 M.

Audit Work and Immediate Changes



- Cooperative Work with the Auditor
- Instituting Technology Governance
- Restructuring Project Management, Delivery and Priorities
- Focus on Accelerating Key Project Deliverables for Decommissioning

Celebrating the Decommissioning of the System from 1977



1977

2023



Databank – HP 3000

```
!showme
USER: #57,MANAGER.SYS,PUB      (NOT IN BREAK)
RELEASE: C.75.00  MPE/1X HP31000 C.45.05  USER VERSION: C.75.00
CURRENT: FRI, SEP  6, 2013, 11:31 AM
LOGON:   FRI, SEP  6, 2013, 10:19 AM
CPU SECONDS: 1      CONNECT MINUTES: 72
$STDIN LDEV: 2      $STDLIST LDEV: 2
!showjob

JOBNUM  STATE  IPRI  JIN  JLIST  INTRODUCED  JOB NAME
#51     EXEC    20  20    FRI  9:48A  OPERATOR.SYS
#52     EXEC   100  1P    FRI  9:48A  JINETO,MANAGER.SYS
#57     EXEC    2  2     FRI 10:19A  MANAGER.SYS

3 JOBS:
0 WAIT; INCL 0 DEFERRED
3 EXEC; INCL 2 SESSIONS
0 SUSP
JOBFENCE= 1; JLIMIT= 0; SLIMIT= 0

[MODIFY] [MODIFY ALL] [BLOCK MODE] [REMOTE MODE] [SMOOTH SCROLL] [MEMORY LOCK] [DISPLAY FUNCTNS] [AUTO 721 * 470]
```



[HP-3000 Minicomputers | 102704211 | Computer History Museum](https://www.computerhistory.org/museum/collections/102704211)



Decommissioned
September 29, 2023



Decommissioning of the System from 1999



1977

1999

2012

2023

2024



● Databank – HP 3000

● IRIS – HP 9000 Enforcement Operations

Scheduled for
Decommissioning
Q1 2024



New Functionality as of 2012



- Online permit applications and renewal
 - gas stations, dry cleaners and autobody shops
 - (1/3 of District's Permitted Businesses)
- Online payments
- All facility data available in one system for reporting
- Business online interaction, automated workflow, emissions triggers, reduced paper and manual processes

September 29, 2023 Functionality



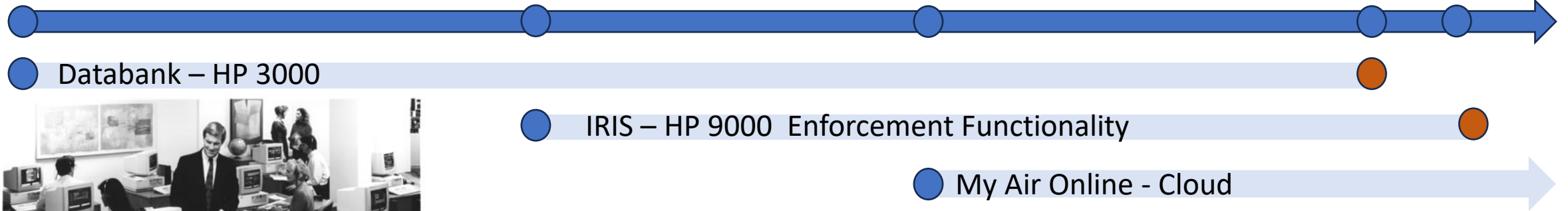
1977

1999

2012

2023

2024



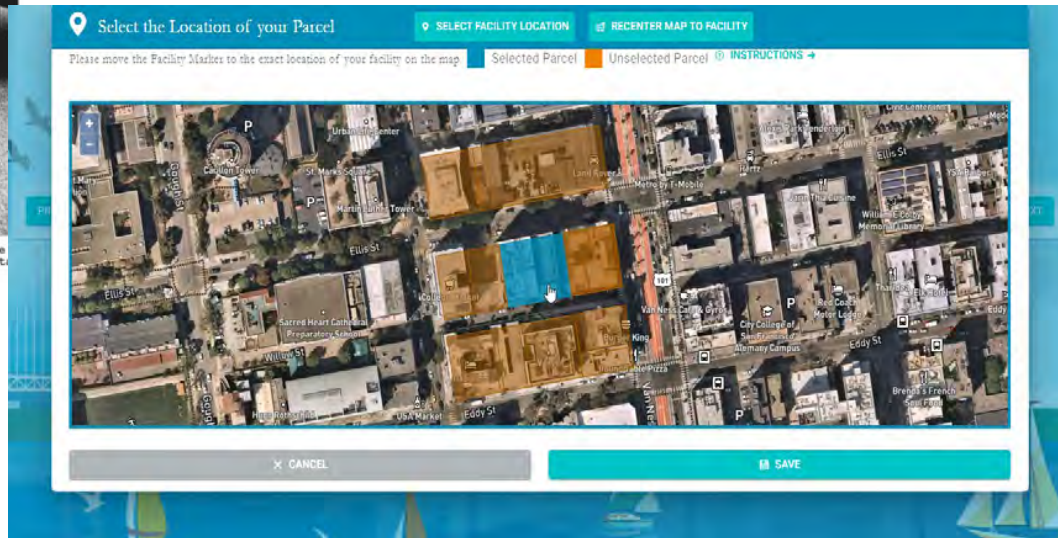
Databank – HP 3000



Deskside HP 3000 minicomputers from Hewlett-Packard Company, such as the System 932, are ideal for today's office or lab environments because they offer high performance and data storage capacity in a compact package. (PRNS4700001)

IRIS – HP 9000 Enforcement Functionality

My Air Online - Cloud



September 29, 2023,

- All Facilities Live
- Technology Current
- 100% of Engineering/Permitting
- Approximately 6 FTE Reduction
- Migrated Enforcement Functions
 - Dispatch
 - Complaint
 - Enforcement Reports

Audit Recommendations Oversight and Transparency



- Twice Weekly Project Status and Risk Meetings with Chief Technology Officer.
- Bi-Weekly Status Update to APCO
- Recommend Quarterly Update to Finance and Administration Committee – Next Report in April

Audit Recommendations Project Management Practices



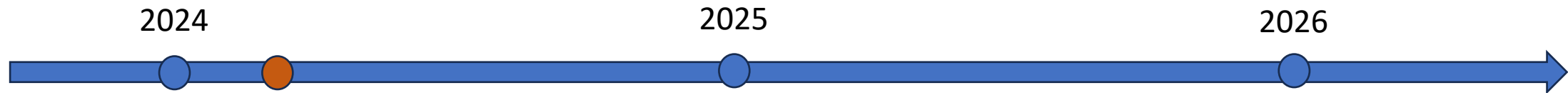
- Cost Reporting to Budget Includes all Project Related Costs
- Refactoring Charge Numbers for Greater Resolution
- Contracts Now Contain Deliverables and Dats (Holdbacks and Incentives for Key Milestones)
- Weekly Status Reporting Managing Deliverables to Contract Identifying Risks and Balancing Resources

Audit Recommendations Eliminate Vendor Lock-in



- Detailed Documentation to be Completed FYE 2025
- Staff Working to Learn the New System and Technology
- Recruiting New Staff with Expert Knowledge of Modern Technology Platforms

Project Roadmap Looking Forward



FYE 2024

- **IRIS Decommissioned Planned (April 2023)**
- **Permitting Enhancements**
- **Enforcement Enhancements**
- **Legal Department Integration**

FYE 2025

- **Full Documentation / knowledge Transfer**
- **Efficiency Enhancements**
- **Resiliency and Security Enhancements**
- **Integrate Strategic Planning Community Facing Transparency***

FYE 2026

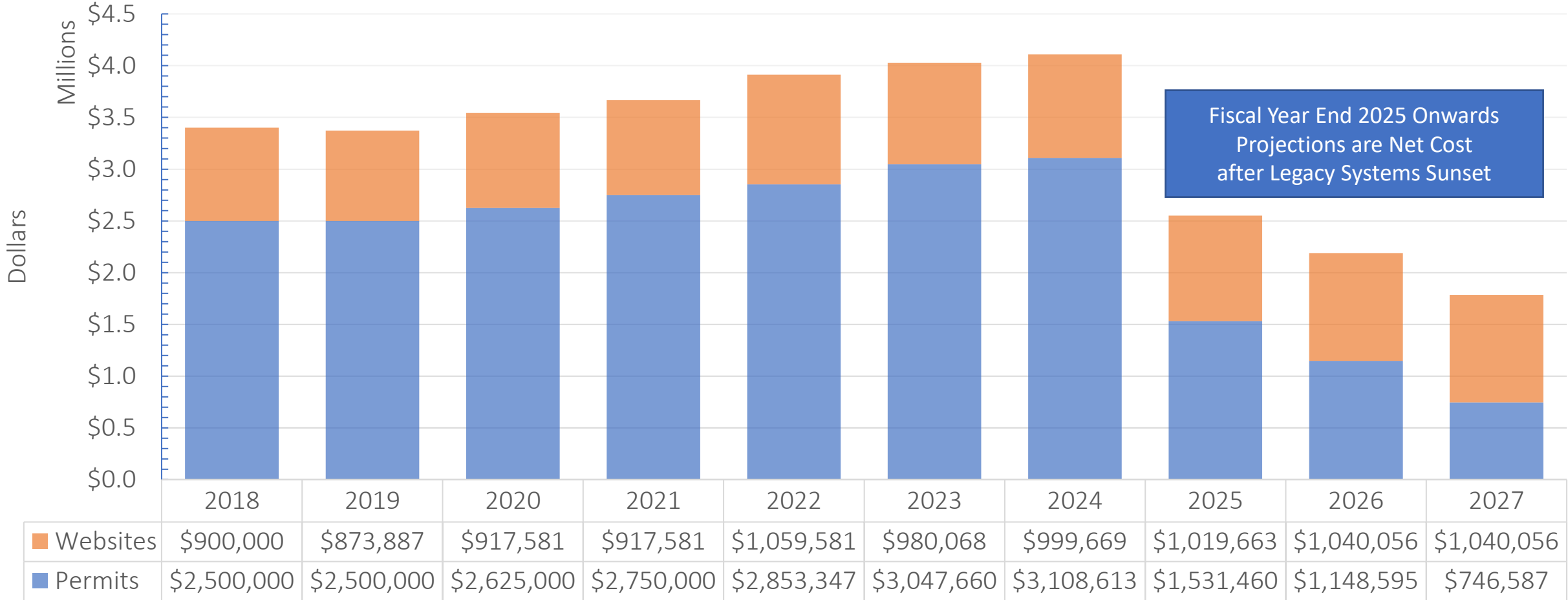
- **Updates and Maintenance**
- **Efficiency Enhancements**
- **Community Facing Mobile Applications***

* Scope and funding needs for these initiatives have not been estimated

Costs Presented to Board on April 18, 2023



Professional Services and Capital Fiscal Year End Budget



Fiscal Year End 2025 Onwards
Projections are Net Cost
after Legacy Systems Sunset

My Air Online Budget Forecast



- FYE 25 Projected Non-Salary Budget Anticipated to be Reduced by \$0.5M (\$3.4M reduced to \$2.9M)
- FYE 25 Net Reduction Including Salary Savings and Operations Costs from Legacy Decommissioning is Anticipated at \$2M +
- Non-Salary Maintenance and Operations Costs Anticipated to Drop to Approximately \$1.1M in FYE 27

Level of Detail in Vendor Contracts



- Defined Deliverables and Milestones
- that are Monthly or Weekly
- Deliverables Narrowed to Individual
- Business Functions

Modules	Design	Entrance Criteria	Build	Test	Acceptance	Launch				
Dispatch	Complete	Complete	Complete	Complete	October 13, 2023	October 30, 2023				
Complaints	Complete	Complete	Complete	Complete	October 14, 2023	October 30, 2023				
Area Assignment	Complete	Complete	Complete	Complete	Complete	October 30, 2023				
CV Tracking	Complete	Complete	Complete	Complete	October 15, 2023	November 17, 2023				
RCA	In Progress	October 9, 2023	October 20, 2023	October 27, 2023	November 17, 2023	January 15, 2024	Complete	Test Complete	Acceptance Complete	In Production
NOV/MUT	In Progress	October 18, 2023	December 15, 2023	December 22, 2023	January 8, 2024	January 15, 2024	er 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024
Reporting	In Progress	October 30, 2023	December 15, 2023	December 22, 2023	January 8, 2024	January 15, 2024	er 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024
ACPO	Complete	Complete	Complete	Complete	December 14, 2023	January 15, 2024	er 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024
Complex Emission Train Editor					October 30, 2023	November 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024	March 30, 2024
Admin Tool to Submit Renewal Data Updates after Invoice Issued					November 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024	March 30, 2024	April 30, 2024
Modifications to Engineering Roles & Permissions					November 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024	March 30, 2024	April 30, 2024
Non-NSR Approval Workflow					November 30, 2023	December 30, 2023	January 30, 2024	February 29, 2024	March 30, 2024	April 30, 2024
Permit Application Enhancements					December 30, 2023	January 30, 2023	February 29, 2024	March 30, 2024	April 30, 2024	May 30, 2024
Emissions Banking Enhancements					December 30, 2023	January 30, 2024	February 29, 2024	March 30, 2024	April 30, 2024	May 30, 2024
Emissions Banking Applications					December 30, 2023	January 30, 2023	February 29, 2024	March 30, 2024	April 30, 2024	May 30, 2024

Vendor Contract Amendments



Vendor	Additional Amount Requested Through June 30, 2024	Service Description
ITDependz	\$426,304	Software development, business analysis and design services for the permitting and compliance system.
C&G Technology Services	\$637,360	Software quality assurance and business analyst services for the permitting and compliance system.
Clearsparc	\$1,316,200	Software development services for the permitting and compliance system.
SupportFocus	\$265,210	Legacy data extract, transform and load services.
TOTAL not to exceed	\$2.65 M	

Recommended Action



Request that the Committee recommend the authorization to execute vendor contracts for the maintenance, operations, development and implementation of permitting and enforcement computer systems not to exceed \$2.65 M



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 6

Remote Teleconferencing Meeting Policy

Finance and Administration Committee Meeting

October 18, 2023

**Sharon L. Landers
Interim Chief Operations Officer
slanders@baaqmd.gov**

Presentation Outline



- Requested Action
- Brown Act
- Remote Meeting Requirements
- Process
- Discussion and Questions

Requested Action



Committee will make recommendations on a policy to be adopted by the Board that allows Standing Committees to use remote teleconferencing locations for their meetings provided that certain specified requirements are met.

Brown Act Requirements for Teleconferencing



- All votes taken during teleconferenced meeting shall be by rollcall.
- Teleconferenced meetings must protect statutory & constitutional rights of the parties or public appearing before Air District.
- Air District shall give notice of meeting & post agendas in location visible to public 72-hours prior to meeting.
- Agenda shall provide an opportunity for the public to address Board of Directors directly.
- Each teleconference location shall be identified in notice & agenda of meeting or proceeding & each location to be accessible to public

Brown Act Requirements for Teleconferencing, Cont.



- During meeting, at least a quorum of members of Air District shall participate from locations within boundaries of territory over which Air District exercises jurisdiction, except in case of an emergency.
- Electronic connectivity through speaker, video, or both, where participant can join in meeting via two-way audiovisual platform or two-way telephonic function. In event Wi-Fi connectivity is lost, meeting must be able to continue through speakerphone connection.

Previous Committee Discussion



- Limiting number of remote teleconferencing locations for each Standing Committee to 4 (not including locations under AB 2449).
- Limiting remote teleconferencing to the Air District's 9 county jurisdiction.
- Limiting remote teleconferencing to offices with access to Zoom & speaker phone.
- Requiring Board members & their staff to receive training with Executive Office to host remote teleconferencing meeting.
- Requiring two POCs for remote teleconferencing meetings.
- Board members' staff to post agenda(s) 72-hours before meeting.
- Written agreement with hosting Board member and Air District committing to all requirements established by the Board.

Additional Remote Meeting Requirements



- Standing Committees to designate remote teleconferencing locations at beginning of year.
- SF City/County may not be used as a remote location; continue Santa Rosa Jr. College & Richmond HQ East as options.
- Teleconferencing locations cannot be within 10-mile drive of another or if less than 10-mile drive, more than 30 minutes commute.
- New meeting host requests to be made to a min. of 8 days before meeting.
- Cancelling remote teleconferencing location min. of 8 days before meeting.

Additional Remote Meeting Requirements, Cont.



- Limiting remote locations to offices with Zoom & speakerphone, so if Wi-Fi goes out, remote location can re-establish via speakerphone.
- Training required for Board members & staff before hosting remote meeting.
- Board member staff to post agenda(s) 72-hours in advance of meeting.
- Locations must be ADA compliant & open min. of 30 minutes before meeting.
- Require security as needed.

Process



- Standing Committee Chair or designee to notify Executive Office of remote teleconferencing location(s) selected at start of year.
- Host location to provide 2 contact personnel responsible at each location.
- Air District to provide required training for Board member & staff.
- Host location staff to notify Air District by email & send photo confirming posted agenda(s).
- Posting less than 72 hours in advance will result in meeting location not being available for Board members but must be open to public.

Requested Action



Request Committee to direct staff to develop a Remote Teleconferencing Policy for Board Adoption to include:

- Authorizing remote teleconferencing meetings for Standing Committees.
- Requirements for hosting a remote teleconferencing meeting to include training, technology, room specifications, staff support & location requirements.
- Max number of remote teleconferencing meetings.
- Deadlines to request to host or to cancel remote teleconferencing meeting.
- Written agreement between Air District & Board member regarding remote teleconferencing meeting requirements.

Discussion and Questions



Committee discussion and questions.