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DATE: November 4-5, 2026

TO: SJVUAPCD Governing Board



FROM: Samir Sheikh, Executive Director/APCO
Project Coordinator: Imtiaz Haq

RE: **ITEM NUMBER 14: DEPLOYMENT OF NEW
INFORMATION TECHNOLOGY SYSTEMS TO
IMPROVE CUSTOMER SERVICE AND
EFFICIENCY**

RECOMMENDATION:

Receive an update on key information technology projects that have been recently completed, are in the process of development, or are planned to be completed in the near term.

BACKGROUND:

Under the guidance of your Board, the District has prioritized the use of the latest technology to improve customer service to Valley residents and stakeholders and to increase effectiveness and efficiency of District staff. The District's Information and Technology Services (ITS) department has the primary responsibility of identifying and implementing new technology and continually analyzes the District's existing systems and looks to pursue opportunities to find automated tools and systems to implement in District programs with a steadfast focus on improving internal efficiencies and processes while continuing to provide the highest level of customer service to members of the public and District staff. Each year, the Board-approved budget identifies and appropriates resources to develop, acquire, and implement key information systems projects. The purpose of this item is to provide an update on major projects/contracts or purchases that have been recently completed, are in the process of being implemented, or are expected to be completed in the near-term future and providing an explanation and/or demonstration of the enhancement to District systems, customer service, and streamlining and efficiency.

DISCUSSION:

At the direction of your Board and through the District's zero-based budgeting process, the District continually seeks opportunities to apply the latest technology to improve services, enhance transparency, and optimize staff productivity. Several key projects have recently been completed, and additional efforts are underway to further advance the District's mission and exceed expectations for customer service, efficiency, and operational excellence.

The implementation of these projects has been instrumental in strengthening the District's ability to serve the public and support staff in their work. Departments across the organization continue to explore and leverage new technologies to expand capabilities and deliver timely, innovative solutions.

The following section summarizes key workload and process improvement initiatives that have been recently completed, are currently in progress, or are scheduled to commence in the near term:

Recent Customer Service and Efficiency Enhancement Projects Completed:

GMS Staff Assignment Dashboard

The District's Grant Management System (GMS) is the foundation for administering and tracking the District's grant programs. To improve program management and operational efficiency, District staff developed a new GMS Staff Assignment Dashboard that gives staff, supervisors, and managers a centralized, clearer view of daily workloads, pending actions, priority items, and follow-up needs.

The dashboard provides an at-a-glance daily summary of the items that need attention. Staff can track application activities, inspection follow-ups, due dates, correction requests, reports, and other pending actions. Key activities are organized into actionable categories with drill-down capabilities that link directly to the associated applications or claims, so staff and supervisors can quickly identify priorities, monitor progress, and address potential delays.

The dashboard gives supervisors and managers better visibility into workloads, outstanding activities, and processing status. This helps management allocate resources, balance workloads, identify bottlenecks, and make sure time-sensitive activities are addressed promptly. Building the dashboard's summary categories and drill-down views traditionally requires a developer to write the database queries, build the user interface, create test cases, and prepare user documentation, use of AI helped reduce the above steps.

Most importantly, the dashboard directly supports the District's mission of serving Valley residents and improving air quality. By helping staff identify and resolve time-sensitive

grant activities before delays occur, it can reduce processing times and move eligible projects from application and funding through implementation more efficiently. Faster delivery of grant funding for projects that replace higher-polluting equipment means air quality benefits are realized sooner throughout the Valley, while applicants receive faster, more responsive, and more transparent service.

Improved Agenda Management and Publishing System

The District developed an in-house, content management-based agenda management and publishing system to modernize and streamline the preparation, maintenance, and publication of public meeting agendas and related information. The new process provides staff with a faster and more efficient method for managing agenda content while reducing the time and effort required to prepare and publish information.

The system simplifies the publishing process by allowing authorized staff to quickly create, update, and maintain agenda content through a centralized platform. Changes can be made efficiently without requiring extensive technical support or republishing entire documents, helping ensure that current and accurate information is available to the public in a timely manner.

An important enhancement is the system's ability to make agenda content more accessible to the diverse communities served by the District. The web-based approach provides robust multilingual capabilities, allowing agenda information to be translated into multiple languages quickly and making important District information more accessible to Valley residents.

Most importantly, the new system improves public access, transparency, and responsiveness while reducing administrative workload and publishing time. By making meeting information easier to publish, maintain, translate, and access, the District can communicate more effectively with the public, expand participation and access to District proceedings, and allow staff to devote more time to activities that directly support District programs and the mission of improving air quality throughout the Valley.

Development of Regulatory Action Database

The District developed an in-house Regulatory Action Database (RAD) that standardizes how rules and plans are created, tracked, and amended. The application serves as a central hub for managing the rules, actions, and plans related to environmental regulations, giving the planning team one organized, reliable source of information. It ensures that all rules, plans, and amendments are stored, organized, and easily accessible, and it links related information to improve organization and access.

Planning staff and management can view key rule metrics through a dashboard that displays milestones, assignments, version history, and other relevant data for each rule and plan. Enhanced search lets users find rules by number, name, and associated

criteria within seconds. This greatly reduces the time staff previously spent searching for rule-related information. Programming staff used AI to assist with application design, coding, testing, troubleshooting, and documentation. These tools let developers complete in days' work that traditionally took weeks, while District programmers kept control of design decisions and final review.

Building the rule dashboard and search function traditionally requires a developer to design the database structure, write the search and reporting code, build test cases, and prepare user documentation. Using AI to generate draft code, create unit tests, and produce documentation, a task estimated at 160 hours of developer time was completed in approximately 100 hours. This project has been successfully completed and is fully operational. The system will integrate with OnBase, the District's electronic document management system, so that rule-related documents remain stored in OnBase while being easily accessible through the new application.

By centralizing rule management, reducing search time, and improving visibility into rule milestones and assignments, the system helps planning staff and management spend less time on administrative tasks and more time on developing effective regulations that support the District's continuing efforts to improve air quality throughout the Valley.

Health Risk Assessment Training Course

The District developed an online Health Risk Assessment training platform to improve access to technical resources and promote consistent, accurate evaluations of potential health impacts from toxic air emissions. Developed in collaboration with the California Air Resources Board (CARB) and the California Air Pollution Control Officers Association (CAPCOA), the platform provides free, publicly accessible training for consultants, businesses, permit applicants, and regulatory agency staff throughout California.

The web-based platform offers instructional videos, practical examples, and step-by-step guidance on conducting health risk assessments using CARB's Hot Spots Analysis and Reporting Program (HARP 2). The self-paced training covers air dispersion modeling, pollutant concentrations, and cancer and non-cancer health risk evaluations. Standardizing training via the ESRI ArcGIS platform helps users prepare more accurate assessments, reduces errors and revisions, and improves the efficiency of District permitting and regulatory reviews. The platform also reduces the need for individualized technical assistance, allowing District staff to focus on other critical regulatory activities while extending the District's technical expertise statewide.

Most importantly, the training improves customer service, supports more timely permitting decisions, and strengthens public health protection by promoting accurate and consistent health risk assessments. These improvements help the District better serve businesses, regulatory partners, and Valley residents while advancing its mission of improving air quality throughout the Valley.

Network Systems Modernization and Resiliency Enhancements

The District completed comprehensive upgrades to its technology infrastructure across all three regional offices, data centers, and regulatory air monitoring sites. These improvements included replacing aging network equipment, modernizing network architecture, strengthening cybersecurity through network segmentation, and standardizing systems to improve connectivity, performance, and reliability.

The upgraded infrastructure enables District staff to more efficiently access critical applications, monitor air quality systems, and remotely troubleshoot equipment, reducing downtime, minimizing the need for site visits, and improving response times. Enhanced network security and monitoring also provide greater protection against cyber threats, helping ensure uninterrupted access to essential systems and services. The District also enhanced network redundancy to reduce single points of failure and improve system availability during equipment failures or service interruptions, helping ensure continuity of critical operations.

Behind the scenes, the District redesigned its IT network and replaced aging routers, switches, and other critical hardware. The new segmented architecture separates systems, users, servers, and critical services into controlled security zones. This limits unnecessary access between systems, reduces the potential impact of a cybersecurity incident, and gives ITS greater visibility and control over network traffic. In addition, enhanced network monitoring capabilities provide ITS staff with greater visibility into network health, performance, and potential issues, allowing for proactive identification and faster resolution of problems before they significantly impact District operations.

Improving Reliability and Business Continuity through Uninterruptible Power Supply (UPS) Upgrades

The District upgraded the UPS batteries supporting critical IT infrastructure at all three regional offices in Fresno, Modesto, and Bakersfield. These improvements help ensure reliable backup power during electrical outages and fluctuations, protecting essential technology systems and reducing the risk of unexpected service interruptions.

The upgraded UPS batteries improve the reliability and resilience of the District's network, servers, and communication systems by providing temporary power during electrical disruptions. This allows critical systems to remain operational during brief outages or shut down safely during extended interruptions, reducing the risk of equipment damage, data loss, and costly downtime.

Most importantly, these upgrades strengthen the District's business continuity and ability to provide uninterrupted services to staff, businesses, and Valley residents. By improving infrastructure reliability and minimizing disruptions to essential operations, the District can maintain critical air quality programs, regulatory activities, and public

services while advancing its mission of protecting public health and improving air quality throughout the Valley.

Efficiency Enhancement and Customer Service Projects Currently in Development:

Dust Control Plan Processing and Inspections

The District is developing a GIS-based Dust Control Plan processing system to streamline the submission, tracking, and review of dust control plans associated with construction and development activities throughout the Valley. Using ESRI ArcGIS mapping technology and Survey123, the system provides a centralized platform for developers to submit information electronically while allowing District staff to efficiently manage and monitor project activities.

The system includes interactive mapping capabilities that allow staff to identify and track Dust Control Plan project locations throughout the Valley. Electronic forms simplify the submission process, reduce paperwork and manual data entry, and improve the accuracy and accessibility of project information. The District is transitioning the application to ArcGIS Online to improve accessibility, support continued development, and provide greater flexibility for future enhancements.

The new system will improve customer service by making it easier for developers and businesses to submit Dust Control Plans while reducing administrative workload and improving staff efficiency. More timely access to accurate project information will also strengthen compliance monitoring and support faster review and response times.

Most importantly, these improvements will help the District better monitor dust-generating activities, support responsible development, and reduce fugitive dust emissions. By modernizing regulatory processes and improving coordination between developers and District staff, the system supports the District's mission of protecting public health and improving air quality throughout the Valley.

Business Process Improvements with Artificial Intelligence

The District has established an Artificial Intelligence (AI) policy pilot initiative that integrates AI into District operations in a manner that improves productivity, streamlines business processes, supports staff with routine and complex tasks, and identifies opportunities for greater efficiency, automation, and improved customer service. Through lessons learned under this pilot and a careful review of best practices and policies adopted or under development at other public agencies, the District is in the final stages of adopting an AI policy that will provide the structured framework for the secure, responsible, and appropriate use of AI technologies in District operations.

As an early area of focus within the District's pilot AI initiatives, the District is evaluating opportunities for utilizing AI to strengthen Information Technology systems and processes. As a key area within this effort, AI can provide significant benefits to cybersecurity through enhanced monitoring, analysis, and early identification of potential security issues. AI also provides significant opportunities for business process improvement by helping staff analyze existing workflows, identify inefficiencies, automate repetitive activities, and develop solutions that improve the delivery of District programs and services. Additionally, the District is evaluating the use of AI to assist with application development, coding, testing, troubleshooting, documentation, and modernization of District-developed systems. These tools provide significant opportunities for enabling programming staff to more efficiently develop application code, while keeping staff in control of design decisions and final review.

AI is intended to supplement, not replace, staff expertise, professional judgment, and established review and approval processes. The District's approach emphasizes security, privacy, data protection, human oversight, and accountability to ensure AI is used consistently with District policies and operational requirements.

Most importantly, the responsible use of AI provides an opportunity to improve how quickly and effectively the District serves Valley residents and businesses. By reducing time spent on repetitive administrative activities, accelerating analysis, improving access to information, strengthening cybersecurity, and streamlining business processes, staff can devote more time to higher-value work that directly supports District programs. These efficiencies can help accelerate permitting, grants, compliance, air monitoring, public information, and other mission-critical activities, supporting faster service to the public and the District's continuing efforts to improve air quality throughout the Valley.

Conference and Meeting Room Technology Upgrades

The District is in the process of upgrading conference and meeting room technology across all three regional offices in Fresno, Modesto, and Bakersfield to improve communication, collaboration, and the reliability of in-person and virtual meetings. These improvements modernize audiovisual equipment, video conferencing capabilities, and meeting room connectivity to provide a more consistent and user-friendly meeting experience for District staff and external participants.

The upgraded technology will simplify meeting setup, improves audio and video quality, and supports seamless participation among staff working across different offices or remotely. Standardized equipment and improved connectivity reduce technical difficulties, minimize meeting delays, and allow ITS staff to provide more efficient technical support. These enhancements also strengthen the District's ability to conduct hybrid meetings, training sessions, and collaborative discussions with regulatory agencies, businesses, and community stakeholders.

Most importantly, these improvements increase staff productivity, reduce travel requirements between regional offices, and enhance communication and customer service. By providing reliable and accessible meeting technology, the District can improve coordination, support timely decision-making, and engage more effectively with Valley residents and stakeholders while advancing its mission of protecting public health and improving air quality throughout the Valley.

Phone System Modernization

The District is working towards migrating from its legacy telephone system to a cloud-based platform, modernizing District-wide voice communications while reducing ongoing operating costs. The new system provides a more flexible, secure, and integrated communications environment that better supports employees working in District offices, remotely, and in the field.

The cloud-based system is expected to improve staff productivity and mobility by providing consistent calling capabilities across desktop computers, mobile devices, and office phones. Enhanced call routing, voicemail transcription, call management, and integration with the District's existing cloud-based meeting environment simplify day-to-day communications and reduce reliance on separate systems and applications. The cloud-based architecture is also expected to lower costs through lesser need for physical hardware infrastructure and administrative requirements associated with maintaining the previous phone environment. The migration also provides significant long-term cost savings by reducing licensing, infrastructure, maintenance, and support costs. Consolidating voice and collaboration services onto a common platform further simplifies administration and improves operational efficiency.

The new system improves the public's ability to communicate with District staff. Enhanced call routing and management capabilities help connect callers with the appropriate staff or department more efficiently, while improved voicemail and mobility features allow employees to remain accessible regardless of their work location. These improvements help reduce missed communications, improve response times, and provide Valley residents and businesses with more responsive and reliable access to District services.

Financial Software Update

ITS is working closely with Finance staff and the District's software vendor to prepare for the implementation of an upgraded cloud-based financial management system, replacing the District's aging financial software. The upgrade will modernize the District's financial operations by improving reporting capabilities, streamlining accounting processes, and integrating grant management functions currently maintained through separate systems. Implementation activities will include system configuration, data migration, integration, testing, and staff training to ensure a smooth

transition while maintaining continuity of critical financial operations, with the goal of completing the upgrade and transitioning to the new system during the second quarter of 2027.

Air Monitoring Systems Upgrades

At the air monitoring sites, new network equipment, standardized software and configurations, and improved connectivity create a more consistent environment for collecting, transmitting, and managing air quality data. District staff can now remotely access, monitor, maintain, and troubleshoot equipment, which reduces time-consuming site visits, speeds up response times, and simplifies ongoing support.

These upgrades strengthen both the availability of real-time air quality information and the security of the systems that support it. More dependable data supports timely air quality assessments, regulatory activities, forecasting, and public notifications used by the District, regulatory agencies, and the public. A resilient network also ensures staff can reliably access the applications, data, and services needed to carry out air quality programs, reducing the risk that a cybersecurity incident could disrupt services to Valley residents and businesses.

Together, these improvements help the District respond more effectively to changing air quality conditions and further its mission of protecting public health and improving air quality throughout the Valley.