

Per California Code of Regulations, title 2, section 548.5, the following information will be posted to CalHR's Career Executive Assignment Action Proposals website for 30 calendar days when departments propose new CEA concepts or major revisions to existing CEA concepts. Presence of the department-submitted CEA Action Proposal information on CalHR's website does not indicate CalHR support for the proposal.

A. GENERAL INFORMATION

1. Date

November 21,
2019

2. Department

California Department of Public Health (CDPH)

3. Organizational Placement (Division/Branch/Office Name)

Information Technology Services Division

4. CEA Position Title

Assistant Deputy Director and Chief Technology Officer

5. Summary of proposed position description and how it relates to the program's mission or purpose. (2-3 sentences)

The California Department of Public Health's (CDPH/Department) is requesting approval to establish a CEA Level B, Assistant Deputy Director and Chief Technology Officer (CTO) in the Information Technology Services Division (ITSD). The Department's mission is to protect the public health in California and helps shape positive health outcomes for individuals, families and communities. ITSD supports the mission and services of CDPH through the implementation of technologies required to ensure the successful delivery of public health services. The CTO will have the executive leadership responsibility for planning, developing, implementing, managing, and supporting CDPH's information technology (IT) operations, and will oversee the teams that provide the major enterprise IT services. The CTO will provide high-level policy design and oversight, overseeing CDPH's complex IT operations, providing crucial support and strategic direction needed to meet CDPH's mission, goals and objectives of its many public health programs. The CTO will ensure compliance with legislated program mandates and act as the liaison to CDPH's external partners and customers.

6. Reports to: (Class Title/Level)

Deputy Director and Chief Information Officer, ITSD/CEA Level C,

7. Relationship with Department Director (Select one)

- Member of department's Executive Management Team, and has frequent contact with director on a wide range of department-wide issues.
- Not a member of department's Executive Management Team but has frequent contact with the Executive Management Team on policy issues.

(Explain):

8. Organizational Level (Select one)

- 1st 2nd 3rd 4th 5th (mega departments only - 17,001+ allocated positions)

B. SUMMARY OF REQUEST

9. What are the duties and responsibilities of the CEA position? Be specific and provide examples.

The CTO will manage, plan, organize, direct, and monitor the work of a multidisciplinary staff of approximately 250 full-time employees, and approximately 60 contract employees with a total annual budget of \$55 million. The CTO will oversee and provide direction for the support of the operations and activities of ITSD, including the following IT Services: application and development services, enterprise services, infrastructure services, client services, data center operations, server and storage management, network services, enterprise architecture, emergency preparedness operation, IT purchasing, email services, and security operations. These activities include, but are not limited to, the analysis, design, acquisition, development, installation, configuration, test, implementation, and maintenance of CDPH's IT infrastructure and enterprise services. More specifically, this includes cloud hosting and security for Office 365, Microsoft Azure, Amazon Web Services, and IBM cloud services; infrastructure virtualization services using VMWare, Oracle and HP products; enterprise security solutions including encryption technologies, client and email security, mobile device management (MDM); SharePoint content management systems, network security; enterprise data analytics, modeling and visualization tools such as MarkLogic, Tableau, GIS, Business Intelligence, R Shiny and SAS. The CTO will provide direction on enterprise technology infrastructure services across all of CDPH's systems and be responsible for the development, establishment, and administration of IT policies for the Department. The CTO will oversee the IT policy development, coordination, and consolidation of infrastructure services with the California Health and Human Services Agency (CHHSA), the California Department of Health Care Services (DHCS), the California Department of Technology (CDT), the Office of Health Information Integrity (OHII), and the Office of Systems Integration (OSI). The CTO will plan, develop, and influence policy and direct over 20 IT services that cover 5000 employees, 40 remote sites, 7,000 personal computers, 1,500 servers, 7,000 emails, and several personal directory systems used to grant access to CDPH systems.

The CTO will provide policy direction, leadership and oversight for the following IT program areas:

The Data Center Operations and Services Branch (DCOSB) is responsible for managing, planning, organizing, directing, monitoring, and controlling Customer Services, Enterprise Services, Infrastructure and Client Services, System Architecture Services Sections, the Emergency Preparedness Office Medical Health and Richmond Campus Coordination Centers, and Emergency Operation Center Information Management Systems. The DCOSB is responsible for managing and planning development, and maintenance activities for CDPH IT infrastructure to ensure economical and efficient IT support for CDPH operations.

The Security Operation Center (SOC) is responsible for monitoring and analyzing CDPH's ongoing security posture. SOC's goal is to detect, analyze, and respond to cyber security incidents using a combination of complex technology solutions, skills and experience, and strong security procedures. SOC staff work closely with the Information Security Office and CDPH programs on incident responses to ensure security issues are addressed quickly upon discovery. SOC monitors and analyzes activity on networks, servers, endpoints, databases, applications, websites, and other systems, looking for anomalous activity that could be indicative of a security incident or compromise. SOC is responsible for ensuring that potential security incidents are correctly identified, analyzed, defended, investigated, and reported.

The Office of Enterprise Architecture (OEA) is responsible for the development and operation of CDPH's IT Enterprise Architectural (EA) team, which establishes the Department's strategic IT plan to ensure that the most complex projects are consistent with departmental and state business and IT goals/objectives. The EA team is critical to CDPH's IT operation, and is responsible for creating an enterprise-wide shared services environment to align with the CDPH Vision for 2035. The EA team ensures complex information interoperability is established between other CDPH programs, state departments, and federal programs. To ensure the effectiveness of the EA program, the CTO will work closely with the Chief OEA, to manage the formation and adoption of architectural and technology principles and standards along with the management of compliance and application of these principles and standards essential to making wise IT investments. Furthermore, the CTO will ensure that policies and standards are in place to provide the most effective use of IT resources department-wide, applying user-centric IT solutions to identify and address emerging business needs of CDPH programs, enabling ITSD to satisfy the changing needs of managing the life-cycle of CDPH data and technology investments, and to conform to CDT framework for Enterprise Architecture.

The Application Development and Support Branch (ADSB) is responsible for the development and support of applications for all centers, divisions and programs within CDPH. These activities include but are not limited to the analysis, design, acquisition, installation, configuration, test, implementation, and maintenance of the Department's business applications. ADSB services cover some of the most critical CDPH programs and systems including: infectious disease reporting, AIDS support systems, licensing and certification applications, vital records, data analytics, environmental health safety systems, cannabis licensing, new born screening testing and Women, Infants, and Children (WIC) support systems. ADSB supports over 200 programs and over 150 applications for CDPH.

B. SUMMARY OF REQUEST (continued)

10. How critical is the program's mission or purpose to the department's mission as a whole? Include a description of the degree to which the program is critical to the department's mission.

- Program is directly related to department's primary mission and is critical to achieving the department's goals.
- Program is indirectly related to department's primary mission.
- Program plays a supporting role in achieving department's mission (i.e., budget, personnel, other admin functions).

Description: CDPH's mission is to advance the health and well-being of California's diverse people and communities. CDPH employs over 3600 employees and has an operational budget of \$3.2 billion. CDPH provides critical services to the public including infectious disease control and prevention, food safety, licensing of medical staff and facilities, environmental health, laboratory services, patient safety, emergency preparedness, chronic disease prevention and health promotion, family health, health equity and vital records and statistics. ITSD supports the mission and services of CDPH by implementing and supporting the technologies required to deliver public services to the people of California. CDPH provides critical public services, such as the immunization and cancer registries, genetic disease screening, licenses and certifications, administering the WIC program, and AIDS services, each of which have complex IT systems that allow the effective delivery of these services. The CTO will oversee the operations that provide the critical enterprise IT services including infrastructure services, network and server security, content management, data center and cloud services, enterprise architecture, data management, enterprise services support, client support, security operation support, and emergency preparedness support.

The CTO will demonstrate strategic technical leadership when making decisions that drive CDPH's use of technology toward improving efficiencies, security, and service delivery. The CTO will be responsible for the adoption of new technologies and recommend and enforce CDPH standards for all existing and new IT business application solutions. The CTO will have policy decision-making authority for selecting the best value solution, and setting the backup standards for all CDPH programs.

B. SUMMARY OF REQUEST (continued)

11. Describe what has changed that makes this request necessary. Explain how the change justifies the current request. Be specific and provide examples.

The complexity and diversity of the IT systems and solutions in CDPH and throughout the State have increased drastically over the past three years due to the adoption of rapid application development, innovation and adaption of cloud hosting services, enterprise architecture standards, infrastructure diversity, cyber security awareness and protection, user mobility applications, and application development technologies such as Agile. To keep up with these changes while providing CDPH with the best available IT solutions that meet the demands of CDPH's business, the CTO position is needed to implement and maintain complex and effective technologies to meet business needs.

The CDPH IT infrastructure, systems, online services, and data management solutions are of the largest and most complex in the State. In addition to the large number of IT state staff, CDPH has seen a significant increase in the number of IT contracts and consulting staff utilized to accommodate for the increase demand for new IT systems and services. Furthermore, CDPH continues to increase the IT systems' capacity and complexity with the additions of new and upgraded systems including: The California Immunization Registry (CAIR); the Electronic Women, Infant, and Children (eWIC), the Newborn Screening System (SIS); the Childhood Surveillance Health Intervention and Environmental Lead Database (SHIELD), the new online licensing and certification system (PegaSystems), and many others. With the expansion of the size and complexity of IT services and staff, there is an urgent need to establish a dedicated CTO position to provide IT governance over the fast changing IT environment and ever expanding business requirements.

The CDPH IT operational responsibilities has increased tremendously as a result of the Governor's reorganization plan, Assembly Bill 2408, which required the consolidation of all IT Services under the CIO. New security and project oversight requirements from CHHSA, DOF, and CDT has required a Department-wide reorganization of IT services and delivery systems. CDPH went through a centralization of all IT staff, resources, and data assets, and will continue to work on building a strategic IT road map to align all IT-related services to advance CDPH's strategic goals and objectives. This IT restructure positioned CDPH to respond effectively to ongoing internal and external IT initiatives including the CDPH Ecosystem of Data Sharing (EODS), CHHSA governance, Open Data, Shared Services, Security Operations Center, and other CHHSA-wide data initiatives that extend between departments under their reporting authority.

The need for CDPH to have a CTO to act as the Assistant Deputy Director is an important component in supporting the Department's vision for public health in the future. Policy development and oversight within ITSD has become far too complex for an effective single-point-of-management by the CIO, Deputy Director, ITSD. The CTO position will provide much needed oversight over the development of IT policy and operational governance. The CIO is currently consumed with high-level executive and political activities and managing stakeholder priorities. The establishment of the CTO will enable the CIO to better concentrate on strategic policy direction and planning for the new business opportunities and challenges that present themselves. The CTO is needed to assist with the management of day-to-day operations to ensure that policies and best practices are adhered to, and that proper oversight is provided to drive the Department's technology initiatives.

The CTO will set policies and decisions for how and where CDPH systems will be structured, built, hosted, and supported, and what technologies will be used to ensure the systems meet the enterprise architecture standards, security polices, and IT strategic roadmap. The CTO will also set policies to prevent siloed applications and encourage interoperability while streamlining and making IT more efficient.

The CTO will oversee the implementation of, and adherence to, state IT policy standards, instructions, and guidelines, including the State Administrative Manual (SAM), Statewide Information Management Manual (SIMM), Public Health Administrative Manual (PHAM), Technology Letters, the State's IT Strategic Plan, and IT-related Executive Orders and budget letters. The CTO will pragmatically leverage information policies, technologies, and applications to provide cost effective delivery of IT services to its business customers (CDPH Programs) that enable the provision of efficient public health services. The CTO will represent CDPH on consolidation committees and influence policy decisions regarding inter-departmental projects and IT consolidation efforts.

C. ROLE IN POLICY INFLUENCE

12. Provide 3-5 specific examples of policy areas over which the CEA position will be the principle policy maker. Each example should cite a policy that would have an identifiable impact. Include a description of the statewide impact of the assigned program.

The CTO will be a member of CDPH's Executive Management team and participate in the development of policies, standards, and business practices. The CTO will be responsible for apprising and advising the Director, Chief Deputy Director's and Executive Team on IT vision, governance, policy direction, and IT best practices.

1. The CTO will oversee the CDPH IT mobility initiatives which include enabling all CDPH users to have the ability to securely connect to internal and external resources from a variety of devices including home computers, laptops, tablets, and mobile devices. The CTO will oversee the design, implementation, and support of the mobility initiative design and required technologies including Virtual Desktop Infrastructure (VDI), Microsoft Office 365 cloud services, Mobile Device Management (MDM), Identity Management using Microsoft Azure Services, and Citrix remote access. These mobility capabilities allow CDPH users, business partners, other state departments, agency, and vendors to securely connect and access CDPH resources and public health services.

2. The CTO will oversee the planning, design, and work of the enterprise SOC which provides CDPH with the highest level of client, infrastructure, network, and internet security including real-time monitoring and response. The SOC provides a critical service to the department and ensures that security threats are discovered, monitored, and resolved. Under the guidance and direction of the CTO, the SOC's team will monitor and analyze activity on networks, servers, endpoints, databases, applications, websites, and other systems, looking for anomalous activity that could be indicative of a security incident or compromise. The SOC is responsible for ensuring that potential security incidents are correctly identified, analyzed, defended, investigated, and reported. The SOC will enable CDPH users and systems to operate efficiently and run securely and without interruption to the business and operation and ensure CDPH services are security provided. The SOC provides the first line of defense to protect CDPH IT assets including email, data and applications. The team uses very complex security technologies including anti-phishing, advanced threat protection, anti-spam, data loss prevention and many more protective technologies.

The CTO will engage in policy and standard formation as it relates to operational IT services. The CTO is responsible for the development, evaluation, and implementation of new and existing security operation policy. The CTO will work closely with the ISO on all security audits and assessments, as required by the Department of Military, CDT, CHHSA, Health Insurance Portability and Accountability Act (HIPAA), California Office of Health Information Integrity (CALOHII), and State Auditor. The CTO will coordinate, update, and maintain CDPH's IT security policy framework that includes a wide range of security policies governing CDPH activities. CDPH will continue to go through many security and privacy assessments and audits based on CDT's new departmental security and privacy standards. Some of these audits, including CDT and CALOHII are on the policy and privacy side, others including Military, and State Auditor are on the IT operation side. These audits are complex and require significant coordination, updating, testing, and remediation. These are necessary opportunities for CDPH to support secure operations and ensure the compliance with security and privacy standards; therefore, providing better public health services.

3. The CTO, in alliance with the Chief Data Officer, CDPH, will provide policy direction to centralize data assets and align all data-related services throughout the Department. This alignment will enable CDPH to respond effectively with leadership, and actively contribute to ongoing CHHSA priority initiatives, including IT governance, agency shared services, the open data portal, and other data initiatives that extend between departments. The CTO will establish and administer policies and standards for the innovative collection, research, analysis, reporting, and distribution of statewide healthcare information. These polices will ensure the quality, integrity, availability, and accessibility of data for the CHHSA Open Data Portal Initiative. In addition, the CTO will oversee the IT operation of the Ecosystem of Data Sharing which is one of the largest CDPH IT initiatives to facilitate data sharing across the different CDPH databases, systems, registries, and other data repositories.

4. The CTO will provide leadership and oversee the maintenance and development of CDPH's IT enterprise architectural standards, the IT strategic roadmap, and policies which establish the framework for the design of systems for the Department. The CTO will establish and administer policies and standards to ensure the most effective use of IT resources across the Department, applying user-centric IT solutions to identify and address the many emerging business needs of CDPH programs, enabling ITSD to satisfy the changing needs of managing the entire life cycle of CDPH data and technology investments, and to conform to CDT framework standards for Enterprise Architecture.

C. ROLE IN POLICY INFLUENCE (continued)

13. What is the CEA position's scope and nature of decision-making authority?

The CTO will serve as a member of the CDPH executive leadership team and will be expected to implement and present strategic initiatives and policy guidance to the Director/Chief Deputy Directors, and executive team on all matters related to CDPH's IT operations, with the goal to effectively centralize and leverage all CDPH enterprise services, data, and information assets across all CDPH programs. The CTO will be responsible for making critical IT decisions including setting up enterprise-wide shared service environments that will align with CDPH Vision for 2035 while ensuring complex information interoperability is established between other CDPH programs, state departments and federal programs; establishing the CDPH infrastructure hosting strategies that must align with the CDT guidelines; and, creating and enforcing adoption of the IT roadmap for all CDPH Center/Offices that will map and align IT technologies and tools with the business and project needs of all CDPH programs. Additionally, the CTO will establish the standards for all IT equipment, technologies and software in the areas of server, storage, client, network, and security. The CTO will participate as a departmental executive on all project steering committees assuring compliance with CDPH and State IT and architectural and security standards and guidelines.

The CTO will oversee, plan, organize, direct, and monitor the work of a multidisciplinary staff of approximately 250 full-time employees and 60 contractors with an annual budget of over \$55 million under the division's responsibilities. The CTO will interact with the CDPH Budgets and Accounting Offices to ensure that appropriate oversight of operational expenditure is implemented. In addition, the CTO will approve all IT purchases and contracts as well as provide feedback and approval for all IT related IT project activities, budget change proposals, and IT contracts.

The CTO will exercise management responsibility and provide policy direction and leadership to ensure the most effective and innovative use of IT resources by CDPH, and ensure that CDPH has and will continue to have the most effective, secure, and innovative systems, analysis, research, and reporting methods to provide quality data and services on California's public health infrastructure.

14. Will the CEA position be developing and implementing new policy, or interpreting and implementing existing policy? How?

The CTO will be responsible for the development, establishment, and administration of all technology-related policy for CDPH. The CTO will work directly with CDPH's Executive Management Team, and program management, on interpreting existing policies and developing new IT policies that protect and build secure and reliable IT operations across CDPH. CDT and CHSA regularly require departments to develop new policies to support the future vision and strategic direction of the State IT. The CTO will oversee the implementation and adherence to state IT policy standards, instructions, and guidelines, including the SAM, SIMM, Technology Letters, the State's IT Strategic Plan, IT Management Memos, and IT-related Executive Orders and Budget Letters.

The CTO will set policy for the appropriate adoption of relevant IT industry standards and best practices for application development, enterprise architecture, data management, and infrastructure operations. In order to continually improve IT service efficiency and customer service and operations, the CTO must incorporate both well-known proven methods as well as new concepts and principles. In the past three years, CDPH has gone through many security audits and assessments from multiple external entities, including CDT, Department of Military, State Auditor, and CalOHII. The result of these audits and assessments require the creation and updating of many operational, security, and privacy policies and guidelines. The CTO will work very closely with ISO, the Privacy Office, the Office of Legal Services, and other entities to make certain policies are established to address the requirements and the corrective actions from these audits. The CTO will be responsible for ensuring that all IT policies related to CDPH IT operation, infrastructure, data centers, client services, data management, network, system access controls and application development are enforced and that they meet all local, state, and federal compliance requirements. Such policies areas may include, but are not limited to: technology investment and acquisition determinations; information security prioritization; governance levels for service delivery within CDPH; risk management; and, IT process monitoring. The CTO will manage policy development and approvals by ensuring compliance with the Department's Cyber Security Framework, audits/assessments, and Enterprise Risk Management implementation procedures.