	CIVIL SERVICE COMMISSION
Opportunity. Diversity. Service. HR COUNTY OF SONOMA **HUMAN RESOURCES DEPARTMENT**	**POSITION CLASSIFICATION STUDY RECOMMENDATIONS AND REPORT**

Job Classification Studied:	Human Services Systems and Programming Analyst
Department/Division:	Human Services Department – Administration – Information Technology Division
Position Reports to (Classification):	Department Information Services Manager
Incumbent:	Steven DeSalvo
Bargaining Unit:	SEIU
Study Requested by:	Incumbent – Stephen DeSalvo

Recommendation:

Approve the adoption of the new classification of Human Services Database Administrator and reclassify one position of Human Services Systems and Program Analyst to the new class, retaining the incumbent in accordance with Civil Service Rule 3.3B.

Justification Submitted in the Request:

The request states that the incumbent, Mr. Steven DeSalvo, has been acting as the Human Services Department's (HSD) Database Administrator (working title) since his date of hire in 2017. As explanation, the request contends that at the time of the adoption of the Human Services Systems and Programming Analyst (HSSPA) class in 2005, the duties associated with Human Services Department's (HSD) database administration were less complex and required less specialty IT knowledge, and database duties primarily utilized Microsoft Access as the department's database management system (DBMS).

Since that time, the technology of database administration and the coinciding needs of the department have grown significantly to stay current with the advancements and implementation of the State's social services IT programs and program delivery. As a result, the County's HSD's database administration requirements have also grown, and HSD has progressed from one SQL Server with 10 databases in 2007 to 12 SQL Servers with 320 databases in 2018.

As such, Mr. DeSalvo's request stated that the associated database administration needs for the HSD have grown exponentially as database management and related technical needs have become more advanced, citing this example of the department's migration from MS Access database to SQL database administration during his tenure in the position. He contends that his assignment continues to be 100% dedicated to HSD database administration and related projects, and concludes that as the sole HSSPA position assigned the oversight for database administration within the HSD IT division, his position is no longer correctly classified in the broad technical professional class of Human Services Systems & Programming Analyst. Review of the request by Human Resources corroborated Mr. Salvo's specialty assignment and provided enough evidence to warrant a position classification study.

Methodology & Background:

Methodology:
The study process consisted of:
- A review of Position Description Questionnaires completed by the incumbent
- Desk audit Interview with incumbents
- Informational interview with Supervisor - Department Information Services Manager

- A survey of comparator counties to determine social services information technology division staffing structures
- An audit of County recruitments conducted for with similar working titles and primary assignments

Background:

The Human Services Systems and Programming Analyst (HSSPA) classification was adopted in 2006 after a county-wide Information Technology classification study. It has not been revised since it was created. This technical, professional class was developed to design, support, and maintain the IT infrastructure associated with Human Services public assistance and social services IT systems, ensuring county and departmental business systems were effectively integrated with the State's social service IT systems requirements, changes, and mandates. The originating 2006 study recognized these IT positions as "decentralized", as the department was not reliant on the Information Systems Department for support to its IT systems and programs. The study asserted that with HSD's IT decentralized operations, it required the creation of social services specialty IT classifications to appropriately capture and classify the associated work, and to provide the necessary IT support activities to the HSD department. As such, HSD's IT division provides IT support to the department's staff as they utilize State social services systems, implements technology changes and updates in response to state mandates, and develops applications and infrastructure that supports the interaction of the end users and multiple state IT systems.

The HSD's IT section is comprised of four units, with the HSD Systems and Programming Analyst class solely assigned to the Reporting, Applications, Data (RAD) unit. This 9-person unit collaboratively serves approximately 1,000 HSD employees and is responsible for application development (web and client), business intelligence/advanced reporting, enterprise data management, database administration, external website maintenance, and implementation and system administration of all programming tools/platforms/systems. It was noted that at the time of the development of the HSD Systems & Programming Analyst, the department had approximately 400 staff.

Findings and Analysis:

Findings:

Mr. DeSalvo was hired into the classification of Human Services Department Systems & Programming Analyst in 2017 through a recruitment utilizing the working title of Human Services Database Administrator. Since time of hire, his position has been dedicated 100% as the Database Administrator. This position is responsible for the enterprise data management of 12+ SQL database servers handling 100 business applications and several operational data store servers. To support HSD staff, the work performed requires knowledge of software development, business intelligence for policy and process development, and multi-systems interface.

His supervisor reports his position works with considerable independence, and that this assignment includes working with internal HSD IT staff, external ISD staff, and other county departments on data access and report development. The work of the studied position carries the overall responsibility for design and installation of major database systems and a high consequence of error related to data security and integrity. The position is also responsible for developing protocols and training on SQL Server auditing and provides overall direction on database administration and management for HSD.

Duties performed by the position include:

- Overall responsibility for SQL server design and installation for HSD database system, data integrity and security, and data integration.
- Responsibility for the development and administration of enterprise level databases management systems and servers including oversight for HSD Microsoft SOL Server Database Management systems

and client/server applications, ensuring high database availability and SQL performance tuning, security, and data modeling.

- Developing online analysis processing techniques (OLAP) to use with complex queries to analyze aggregated historical data from online transaction processing (OLTP) in real time.
- Data extraction, transformation, and loading in HSD data warehouse environments; ensuring data from multiple productions systems with differing formats are transformed into data standardized definitions for use.
- Performs business analysis and communicates with HSD business units to understand objectives and needs, defining and documenting data management business requirements; and coordinate accordingly with HSD users with county information technology protocols.
- Acting as project manager for the HSD system, develops, designs, and implements associated database system improvements and changes; selects vendors, oversees and directs vendor's work ensuring data integrity and security.

The knowledge and abilities required to successfully perform the work include:

Considerable knowledge of: Enterprise Data Management/Data Governance; MS SQL Server Management Studio; MCSE Data Platform or MCSE Data Management and Analytics; software/database systems lifecycles; database administration and management, operating systems, web-based applications, software products; principles of database design; advanced enterprise development skills, data collection and classification procedures; systems problem identification, tracking, and resolution; project management and vendor oversight techniques; the inter-relationship of mainframe, database support including data extractions, queries, and reporting, application development and support; principles of systems and procedures analysis and documentation; uses and limitations of associated applications.

Knowledge of: State social services programs such as CalWIN, CalSAWS, CalHEERS and related information technology systems and Human Services IT operations; technical requirements gathering and the management of Relational Database Management Systems (RDMS), networking and Web servers; structured coding and analysis; application development products; specific programming techniques and languages; mainframe, mid-size, and client-server network systems capabilities and operations; methods and techniques of troubleshooting hardware, software and inter-connectivity problems; principles of data security; methods and techniques of providing support to staff and end users.

Ability to: perform complex business analysis and communicate effectively with HSD business units to understand objectives and needs, defining and documenting data management business requirements; and coordinate accordingly with HSD users with county information technology protocols; program ETL jobs using industry standard programming languages and MS SQL Server, manage ETL scheduling, and troubleshoot issues; produce effective technical documentation, complex data modeling, and reports; develop and foster the professional relationships required to work effectively with a diverse group of businesses, programs and managers.

Analysis:

Review of the of the Human Services Systems & Programming Analyst class description showed a broad representation of IT duties associated with professional level IT work in HSD computer programming, application development, and database management. Some of the HSSPA duty statements associated with the studied position include:

- Defines standards and models for database architectures.

- Maintains database dictionaries, ensures database performance and resolves related problems.
- Analyzes database and security requirements based on current and future needs and priorities as well as legal, procedural, and operational requirements.
- Designs and/or oversees the modification of complex databases and other departmental applications to maximize the systems' effectiveness and security.
- Ensures data integration.
- Performs business analysis and communicates with HSD business units to understand objectives and needs, defining and documenting data management business requirements; and coordinate accordingly with HSD users with county information technology protocols.
- Works with customers to develop complex data reports and uses reporting tools to generate and compile reports from various sources of data.

Research into these duties showed substantial information technology advancements in the database management and administration field since the adoption of this classification. These changes include data mining, storage, mandated reporting, business intelligence efforts, systems interface, and client web-based access to data and, most prominently, data integrity and security. These factors have contributed to database management emerging as a specialty in the information technology field with a specific knowledge base, skill set, and options for formal training found at higher education institutions.

Research of comparable agencies and like positions show database administrator responsibilities for social services programs have significantly expanded with the advent of online access by clients, requiring social services IT departments to manage and administer a growing number of databases, some of which are very large. This shift requires more complex programming and management and the development of related specialty knowledge and skills.

HSD information technology services requires the ability to have, or to gain, familiarity with specific external state social services systems. Additionally, HSD database management includes multiple internal database systems within the four County Human Services areas of Family, Youth and Children, Adult & Aging, Employment and Training, Economic Assistance and Administrative Services (Finance/HR/IT).

With responsibility for these multiple systems, the incumbent's current duties and responsibilities for the HSD database administration require thorough knowledge in the database management field, and the ability to apply this expertise to the support of these social services programs. With the responsibility for oversight of HSD database administration, he performs business analysis and project management duties for related consultant/vendor projects. Further, he provides direction to other HSD staff regarding data management, access, queries/reporting, and related application & software design; acts as the subject matter expert for database changes with social services state-wide systems and their internal application and use; and guides the department on database improvement and protocol.

Given this high level of responsibility and specialty knowledge required to perform the work, Mr. DeSalvo's assignment is determined to be outside the scope of his current classification as Human Services Systems and Programming Analyst.

Other County classifications outside of HSD were reviewed for accurate representation of the incumbent's work including the Programmer Analyst, Department Information Systems Analyst, and Systems Software Analyst. However, the professional County IT classifications reviewed did not represent the required level of expertise in HSD utilized data management systems including Enterprise Data Management/Data Governance; MS SQL Server Management Studio; MCSE Data Platform or MCSE Data Management and Analytics.

In comparison, the HSD professional IT classification of HSD Network Analyst functions as a staff resource in the technical design and development of the Human Service Department's wide area network (WAN) and local area networks (LANs); performs related complex IT professional work including planning, analyzing, designing, developing, testing, configuring, installing, implementing, integrating, and maintaining networked systems used for the transmission of information in multiple formats. This class does not perform database administration, and so is not a match for the incumbent's current duties.

To accurately recognize the incumbent's duties as assigned, the level of responsibility and consequence of error associated with the work, as well as correctly identify the required greater complexity and technical specialties, it is recommended that the creation of a new classification of Human Services Database Administrator be approved.

Recommendation

Approve the adoption of the new classification of Human Services Database Administrator and reclassify one position of Human Services Systems and Program Analyst to the new class, retaining the incumbent in accordance with Civil Service Rule 3.3B.

Report Prepared by:	Gail Papworth, Human Resources Analyst III
Report Approved by:	Spencer Keywood, Recruitment and Classification Manager
Date:	2/18/21