STATE OF WISCONSIN
CLASSIFICATION SPECIFICATIONS

INFORMATION SYSTEMS (IS)
ENTERPRISE DATA SERVICES CLASSIFICATIONS

I. INTRODUCTION

A. Purpose of This Classification Specification

This classification is the basic authority [under Wis. Admin. Code ER 2.04] for making classification decisions relative to present and future professional positions, which are the principal authority on the applications and feasibility for employing new technology for the State of Wisconsin Enterprise. Positions perform professional duties for the majority of time related to one or more of the classifications within the IS Enterprise Data Services occupational area. There are four classification levels within this one classification specification, and they are: IS Enterprise Data Services Professional, Senior, Specialist, and Consultant/Administrator.

Classification decisions must be based on the "best fit" of the duties within the existing classification structure. The "best fit" is determined by the majority (i.e., more than 50%) of the work assigned to and performed by the position when compared to the class concepts and definition of this specification or through other methods of position analysis. Position analysis defines the nature and character of the work through the use of any or all of the following: definition statements; listing of areas of specialization; representative examples of work performed; allocation patterns of representative positions; job evaluation guide charts, standards or factors; statements of inclusion and exclusion; licensure or certification requirements; and other such information necessary to facilitate the assignment of positions to the appropriate classification.

B. How to Use This Classification Specification

This classification specification includes professional IS Enterprise Data Services positions at the Professional, Senior, Specialist and Consultant/Administrator levels, which are identified in Section II of this specification.   The IS Enterprise Data Services classifications includes numerous allocation patterns or job types.

Section II.A. defines the duties performed by positions appropriately included in the IS Enterprise Data Services classification. Use this section to determine the correct job family classification. Then, use sections II.B. and II.C. to determine the appropriate classification level within that job family classification for the position: Professional, Senior Specialist or Consultant/Administrator.

For classification purposes, the majority of duties assigned to a position **must** meet level **and** classification definition.

C. Inclusions

This classification encompasses only those professional positions performing Information Systems (IS) duties for the majority of time which impact on the State Enterprise. Positions in

this classification are located in the State of Wisconsin, Department of Administration and perform enterprise-level IS work identified in Section II under Definitions. The Department of Administration is charged with all aspects of the operation of the state's mainframe computer utility and the network through which customer agencies access to Info Tech services. The Department of Administration provides information technology planning, development of statewide systems, and management (including identification and implementation) of standards for enterprise-wide information technology tools, products, functions and systems. These positions must meet the level definition in Section II of this specification. Positions in this classification are responsible for enterprise-wide IS services as described by the definition section.

D.   Exclusions

Excluded from these classifications are the following types of positions:

1.   Supervisor positions as defined in Wis. Stats. 111.81(19), and as administered and interpreted by the Wisconsin Employment Relations Commission.

2.   Confidential positions as defined in Wis. Stats. 111.81(7), and as administered and interpreted by the Wisconsin Employment Relations Commission.

3.   Positions which are not engaged for the majority of time in "professional employee" work as defined in Wis. Stats. 111.81(15) (a) or (b), and as administered and interpreted by Wisconsin Employment Relations Commission.

4.   Positions which are not engaged in enterprise-level IS work for a majority of time.

Positions which are not located within the Department of Administration.

5.   Clerical, paraprofessional or professional positions which utilize computer systems in a business area, specialized program or reporting area and which are concerned with the manipulation of data contained in the system, and with responsibilities including program policy development and/or implementation, inputting of data into the system, correcting or modifying data, generating program reports and statistics, evaluating the effectiveness of the system, and providing information and technical assistance to users of the program system and liaison with IS professional staff. The primary purpose of these positions and the majority of the assigned duties are not the development or maintenance of the computer system.

6.   IS (IS) Technician positions which spend the majority of time (more than 50%) engaged in any combination of the following activities: operating and monitoring a computer and/or teleprocessing network; routine computer programming and debugging; controlling data by coordinating and executing computerized system production runs; operating peripheral equipment; installing, maintaining, repairing and servicing computer hardware; installing software and upgrades and assisting with troubleshooting software and hardware problems; providing routine technical assistance; performing technical related work in the day-to-day maintenance of the LAN or WAN; completing data processing production for major, complex, integrated systems; or providing first level technical problem determination and resolution, and related job duties.

7.   Positions which do not perform IS work for the State of Wisconsin Enterprise.

9.   All other positions which are more appropriately identified by other classification specifications.

E.   Entrance Into These Classifications

Employees enter positions within this classification series by competition. Progression to the IS Enterprise Data Services Specialist level will occur through reclassification. A progression series means a classification grouping whereby the class specifications specifically identify an entry and full performance senior level. The full performance senior level within a progression series means the classification level that any employee could reasonably be expected to achieve with satisfactory performance of increasing complex duties or the attainment of specified training, education or experience.

An employee may have his/her senior level position considered for reclassification from the IS Enterprise Data Services Senior classification to the IS Enterprise Data Services Specialist classification. All other employees will enter positions within this classification series by competition.

A position assigned to the IS Enterprise Data Services Consultant/Administrator classification is the Enterprise principal technical authority in the referenced IS area with respect to multi-agency issues and applications. When circumstances permit on a case-by-case basis, movement to the Consultant/Administrator level may also be by reclassification.

F.   Definition of Information Systems Terms

To assist in the evaluation of positions for inclusion in this and other Information Systems classifications, definitions of IS related terms are provided in a document titled "Information Systems/Technology Definitions" which is incorporated herein by reference as though fully set forth. This document should be used with the classification specifications which have Information Systems and Information Technology as part of the class title.

II.   DEFINITIONS

For classification purposes, a position must meet the level **and** the classification definition.

A.   **Data Job Family**

The Data Job Family covers those positions responsible for the planning, development, implementation, and administration of systems for the acquisition, storage and retrieval of data. Position types include data professionals, database administrators, database developers, data architects and administrators, data warehouse specialists, storage professionals and GIS data managers. Staff occupying positions in this family have the experience to serve the data technology needs of the agency business areas as well extra-and inter-agency requirements.

Positions which spend the majority of their time (50% or more) on one or more of the following duties are appropriately included in the IS Enterprise Data Services job family classifications:

1.   Discover, analyze, organize and document business data requirements.
2.   Design, develop, install, implement, tune, plan capacity, and recover databases.
3.   Design and implement data inventory and documentation approaches.
4.   Install, upgrade and maintain database management systems software. Database systems software problem identification, diagnosis and correction.

5. Provide technical support of data modeling tools, data design tools, GIS software, data dictionaries, repositories, data warehouse extract/transform/load tools, data reporting tools.

6. Participation in the planning, drafting, and creation of data related policy, standards, guidelines, manuals and procedures.

7. Develop and implement procedures to manage information with consistency and quality.

8. Design, develop, populate, maintain, plan capacity for, tune and otherwise administer data warehouses, reporting data structures, and/or data marts with optimal performance goals.

9. Analyze, design, implement, and support data architectures.

10. Design training materials and teach others to use data analysis, design, and management techniques and tools.

11. Study and provide recommendations on new database, data modeling, metadata repository, ETL, reporting, or other data management tools, procedures, and methodologies.

12. Conduct complex analysis and display of data in a geographic dimension.

13. Develop and manage standard geographically-based datasets for use by others.

14. Support GIS work of others through training, material development, consultation and research.

15. Research, select, support and oversee the installation of GIS software.

16. Design and implement techniques to use databases as an integration point between applications.

17. Develop and monitor compliance with policies and procedures controlling integrity of and access to data.

18. Assess security risks of networks and applications.

19. Develop and implement educational programs about security.

20. Participate in network and system design to ensure security.

21. Perform disk management for the installation and configuration of database management system software – e.g., analyze and determine location of system executables, redo logs, archive logs, system data files, application data files and index files.

22. Perform database object administration – e.g., create database instances, tablespaces, tables, indexes, and views.

23. Perform database security administration – e.g., Creates users, roles and profiles. Controls and monitors user access to databases.

Positions appropriately classified in the IS Enterprise Data Services job family classifications may perform some of the following duties, but would not spend the majority of their time on one or more of these duties:

1. Use data models or data documentation tools to access information about data.

2. Use existing data structures and reporting tools to answer business questions.

3. Analyze data using business analysis and basic GIS software.

4. Participate in building or review of data models as a business representative.

5. Act as a data steward/custodian by granting access to data, defining data, identifying and resolving data quality issues.

6. Provide business requirements for the application development process.

7. Use data policy, standards, guidelines, or procedures in the development of software applications.

8. Use data warehouses, data marts, or other reporting data structures for reporting purposes.

9. Adhere to data-related standards, policies and procedures.

B.   Level

IS ENTERPRISE PROFESSIONAL

This classification is used as an entry progressing to a development level for professional IS positions. Work is performed under close progressing to limited supervision. Although this is the entry-developmental level for this series, knowledge of fundamental IS concepts, principles and practices must have been acquired before appointment into this classification; the focus is on learning the procedures, practices, techniques and technology for the assigned specialized area; and assignments are narrow in scope. As the employee progresses, s/he continues to develop knowledge of the specialized area and the associated IS concepts, principles, practices, and techniques.

IS ENTERPRISE SENIOR

Positions at this level work under general supervision. The technical work performed by a position at this level may be reviewed by the position's assigned supervisor for agreement with the agency's established technical direction, policies and standards. This is the full performance level, and it is the level that an employee in this series can reasonably expect to attain. An employee at this level has acquired a broad knowledge of general IS concepts, principles, practices and techniques **and** broad knowledge of the job family and classification to which the position is assigned. Positions at this level may lead positions at the Professional and Senior level in the completion of projects and work assignments. Positions at this level may support the activities of IS (Enterprise) Specialists, Consultant/Administrators and may work under the day-to-day direction of IS (Enterprise) Specialists, Consultant/Administrators.

IS ENTERPRISE SPECIALIST

Positions at this advanced level work under general review with objectives and priorities established by overall work unit directives. There is little review of technical recommendations and solutions by a supervisor. Positions at this level will implement technical policies, standards and procedures, which impact on the enterprise IS functions. The employee possesses and applies extensive, comprehensive knowledge of IS architectures as well as IS concepts, principles and practices as applied in the specialized enterprise functional area. The employee independently resolves conflicts and problems through the application of general policies and IS policies and standards. The majority of work assignments are difficult and complex and focus on IS as defined under the definition section for the technical services job family. Positions in this classification **must** interact with multiple agency and/or campus business managers and IS customers as well as other professional IS managers and staff in the completion of assigned duties.

IS ENTERPRISE CONSULTANT/ADMINISTRATOR

Positions at this level work under broad policy guidance derived from management policy on Information Technology. Positions at this level coordinate and develop standards for the enterprise technologies to achieve the goals of this guidance. A position covered by this specification is the Enterprise principal technical authority in the referenced IS area with respect to multi-agency issues and applications. Work performed by a position in one of the classifications must focus, for a majority of the time, on the IS area of expertise. Technical review is based on effectiveness in planning, implementing, and supporting multi-agency

technologies. A position at this level must provide direction, guidance and consultation on IS technical issues specific to the area of Expertise to multi-agency teams which may be at all position levels. Actions by a position at this level result in the establishment of technical policies, parameters and standards pursuant to management policy on Information Technology. Positions covered by this specification must provide direction on issues which have impact and implications statewide. Positions at this level will lead and coordinate studies, projects and advisory groups, which span multiple agencies and/or campuses.

C.   Classification Definitions

IS ENTERPRISE DATA SERVICES PROFESSIONAL

This classification is used as an entry progressing to a development level for professional IS Data Services positions. Work is performed under close progressing to limited supervision. Positions spend the majority of their time performing any combination of the following duties:

- Evaluate customer's request for data development and access.
- Determine appropriate tool for data access, within department standards.
- Train and support customers in use of data access tools.
- Analyze customer's data needs.
- Identify data entities and relationships.
- Define data elements in data dictionaries in support of applications / systems development.
- Define and resolve problems with application databases.
- Use GIS database and related attribute information to compose cartographic representation of GIS data.
- Perform mapping output for customers.
- Direct the work of GIS technicians.
- Use GIS tools and languages.
- Work with geographic data.
- Analyze GIS data sources.
- Process geographic or remote sensing data into rational data structure.
- Define processing procedures for heterogeneous GIS data sets.

IS ENTERPRISE DATA SERVICES SENIOR

Positions in this classification perform professional IS work, for the majority of the time, related to the analysis and development of logical data relationships and/or the development and management of databases which support data collection, retention, retrieval and access. Data services provided cover a variety of data, including Geographic Information System (GIS) and Image. Senior level positions spend the majority of their time performing any combination of the following duties:

- Develop logical data modals.
- Develop and maintain databases.
- Oversees database management software.
- Analyze recommend and implement changes in physical database structure.
- Develop, design and output cartographic products for GIS data customers, including maps and map series.

- Assist Data Services Specialists and/or Consultants with their responsibilities.

IS ENTERPRISE DATA SERVICES SPECIALIST

Positions in this classification perform advanced, professional IS work related to enterprise data resources for the majority of the time. This work will have significant cross-agency impact related to the management of data as a resource, analysis and development of enterprise data model, data mapping, and the selection, implementation and management of databases and use of database management and retrieval software across multiple platforms and operating systems. Projects in this area will require expertise in designing and implementing interfaces between systems using different hardware, application software, operating systems and/or database management packages. This classification includes the following representative positions or job types:

IS Enterprise Data Planning Specialist - Positions perform, for the majority of time, detailed data analysis of existing applications, map existing data inventories to possible applications in selection processes, plan and implement conversions and interfaces on a variety of hardware and operating system platforms and across agency and application boundaries.

IS Enterprise Data Specialist - Positions perform advanced IS work on enterprise-wide administrative applications (e.g. State Accounting, State Personnel/Payroll, State Procurement), with multiple subsystems, impacting all or nearly all state agencies, boards, institutions, or campuses; lead the development and implementation of data policies and procedures, coordinate the development of data models, and lead the utilization of data analysis and modeling tools and techniques for large and major enterprise projects with statewide impact; develop data models, data dictionaries, and migration plans for enterprise IS projects with impact and implications for all state agencies; and provide technical and practical direction to project teams on technical areas related to management of data as a resource, data analysis, data models, relationships with database software, and client access to data.

IS Enterprise Storage Specialist - Positions perform data storage management for the enterprise; provide technical support and direction on complex mainframe application and technology needs; implement data storage subsystems; and create and manage data set libraries including maintaining data integrity and recovery. Positions monitor usage, manage storage capacity, and consult on hardware, software, and changes/problem definitions. Coordinate installation and maintenance of vendor releases of storage software and train customers in various data storage functions.

IS ENTERPRISE DATA SERVICES CONSULTANT/ADMINISTRATOR

Positions in this classification have responsibility for the management of data resources on an enterprise-wide basis or are the principal technical authority on data analysis and modeling and data tools for all state agencies. The enterprise-level IS work performed by positions in this classification results in the establishment of statewide technical data policies, standards and guidelines for the management of all aspects of the state's data resources across all agencies. This classification includes the following representative positions or job types:

IS Enterprise Data Administrator - Positions administer all data policies, procedures and standards for the data resources of the enterprise. Duties at this level may encompass

both the logical and physical aspects of data and databases. Positions are the enterprise technical authority for problem resolution related to data resource management and provide consultation to other IS professional staff in the use of data management tools, i.e., data encyclopedia, data dictionary from an enterprise perspective.

IS Enterprise Storage Consultant - Positions perform data storage planning; provide technical consulting to Enterprise customer's programmers; oversee implementation of data storage subsystems; and tune data storage subsystems products to ensure optimum utilization of enterprise resources.

III.   QUALIFICATIONS

The qualifications required for these positions will be determined at the time of recruitment. Such determinations will be made based on an analysis of the goals and worker activities performed by an identification of the education, training, work or other life experience which would provide reasonable assurance that the knowledge and skills required upon appointment have been acquired.

IV.   ADMINISTRATIVE INFORMATION

These classifications were created as a result of the Information Systems Survey and the abolishing of the Management Information Specialist 1 through 7 series. The classifications created more accurately represent the actual duties of the positions in the survey. The IS classifications were collapsed effective December 31, 2000 and announced in Bulletin CLR/SC-124.

This classification was modified effective June 28, 2015 and announced in Bulletin OSER-0396-CC/SC to update the definition language and add the Professional and Senior levels.

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