STATE OF NEVADA
DEPARTMENT OF ADMINISTRATION
Division of Human Resource Management

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<u>MEMORANDUM</u>
HR# 24-24

May 3, 2024

TO: DHRM Listserv Recipients

FROM: Bachera Washington, Administrator *Bachera Washington*
             Division of Human Resource Management

SUBJECT: PROPOSED CLASSIFICATION CHANGES – GIS ANALYST SERIES

Attached are revised proposed classification changes for your information pursuant to NRS 284.160, subsections 3 through 5. If you have any comments or objections regarding these changes, please send your written notification to Interim Deputy Administrator Keisha I. Harris at kiharris@admin.nv.gov no later than May 24, 2024.

If no written objections are received in this office by May 24, 2024, action will be taken to effect the changes and a report will be made to the Human Resources Commission.

Attachments

NOTICE OF PROPOSED CLASSIFICATION CHANGES

Number: Posting #29-24
Posting Expires: May 24, 2024

Per NRS 284.160, the Administrator may make a change in classification without the prior approval of the Commission. The following change(s) are proposed:

CURRENT				PROPOSED			
CODE	TITLE	GRADE	EEO-4	CODE	TITLE	GRADE	EEO-4
6.343	GIS Analyst IV	40	B	*6.343*	*No Change*		
6.342	GIS Analyst III	38	B	*6.342*	*No Change*		
6.341	GIS Analyst II	36	B	*6.341*	*No Change*		
6.340	GIS Analyst I	33	B	*6.340*	*GIS Analyst I*	*33*	*B*
6.339	GIS Analyst Trainee	31	B	*12.159*	*No Change*		

Basis for Recommendation

As the result of a Nevada Position Questionnaire (NPD-19), the Division of Human Resource Management conducted a review of the GIS Analyst I class. GIS Analysts are responsible for designing, implementing, supporting and administering a department's and/or division's enterprise geographic information system.

In coordination with subject matter experts from the Department of Conservation and Natural Resources (DCNR), staff within the Nevada Department of Transportation (NDOT) and analysts within the Division of Human Resource Management (DHRM) it is recommended that the GIS Analyst I class concepts be amended to include verbiage that would allow positions to be permanently allocated at this level to perform duties of the series in a more limited manner as determined by the agency.

This change will allow State agencies more flexibility in task assignments and will further assist with recruitment efforts by broadening the applicant pool.

Throughout the review management and staff within DCNR and NDOT and analysts within DHRM participated by offering recommendations and reviewing changes as the process progressed and they support the recommended changes.

Changes to the class specification are noted as follows: additions in blue and deletions in red.
The formal recommendations and specifications are on file with the Division Administrator, Human Resource Management. To view a copy in Carson City, go to 515 East Musser Street; in Las Vegas, go to 7251 Amigo Street, Suite 120. You may also view the recommendations and specifications online at https://hr.nv.gov/Sections/Classification/Proposed_Classification_Changes/ . For additional information call (775) 684-0137.

Objections to the proposed new classification must be received in writing by May 24, 2024. Objections should be addressed to Keisha I Harris, Interim Deputy Administrator, Compensation and Classification Section of the Division of Human Resource Management, 515 East Musser Street, Carson City, Nevada 89701-4298.

POSTING DATE: May 3, 2024

CLASS SPECIFICATION

TITLE	GRADE	EEO-4	CODE
GIS ANALYST IV	40	B	6.343
GIS ANALYST III	38	B	6.342
GIS ANALYST II	36	B	6.341
GIS ANALYST I	33	B	6.340
GIS ANALYST TRAINEE	31	B	6.339

SERIES CONCEPT

GIS Analysts are responsible for designing, implementing, supporting and administering all aspects of a department's and/or division's enterprise geographic information system.

Develop and maintain the Geographic Information Systems (GIS) which may include any of the following: maintenance of the statewide road network, calibrated linear referencing methods and associated GIS data layers and/or maintenance of the enterprise GIS servers, databases, associated data layers, web maps and other GIS data products as needed; ensure agency business units' ability to integrate and synchronize business data.

Plan, design, modify, implement and administer multiple spatial databases; develop and enforce administration procedures and security standards; facilitate and monitor multi-user versioned editing and viewing workflows; design, implement and monitor spatial database security, performance and availability; create database objects, user and roles; create and maintain spatial database replication environment, schedule and monitor replica synchronizations; test and perform software updates.

Install, configure and administer GIS Server application software; create, optimize, publish and monitor multiple web map, feature, geoprocessing, and search services on the intranet and internet; document web service data source dependencies.

Develop, implement, document and enforce GIS server-related administration procedures and security standards; monitor system utilization and responsiveness, and tune server configurations to enhance performance and ensure availability of published services; test and perform software updates; collect user requirements, design, write, test, deploy and maintain multiple statewide custom GIS software applications using multiple programming languages; develop and enforce GIS application-related operational procedures and security standards; adhere to software development best practices, maintain code in shared source code repositories, and maintain technical currency with coding techniques and relevant Information Technology (IT) and GIS technologies.

Analyze user requirements, existing business workflows, policies, regulations and statutes to develop and implement enhanced GIS-based solutions and workflows; determine project objectives by analyzing user needs through consultation with end users, technicians, analysts, management and vendors; review available hardware and/or software tools to choose appropriate implementation platform; identify required sequencing of steps and coordination with other personnel; execute project steps and ensure that project deliverables meet customer requirements; provide technical support to end users in order to resolve software and database related issues.

Design, implement and maintain GIS datasets and perform quality assurance/quality control procedures and corrections; perform spatial analyses and interpret and communicate analytical results; use Global Positioning System (GPS) hardware and software to collect and validate data in the field; may utilize Unmanned Aerial Systems (UAS) consisting of hardware, to include Unmanned Aerial Vehicles (UAV), to collect data in the field and use associated software to post process and validate collected data; produce digital and printed cartographic products using GIS software.

GIS ANALYST IV	40	B	6.343
GIS ANALYST III	38	B	6.342
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GIS ANALYST I	33	B	6.340
GIS ANALYST TRAINEE	31	B	6.339

Page 2 of 6

SERIES CONCEPT (cont'd)

Coordinate and conduct formal and informal training sessions to educate end users on the usage of off-the-shelf and custom GIS software; coordinate with internal and external entities to disseminate and share GIS data, and collaborate on GIS projects.

Perform related duties as assigned.

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CLASS CONCEPTS

GIS Analyst IV: Under administrative direction, performs duties outlined in the series concept and, in addition, manages GIS functions for the department/division and supervises subordinate GIS Analyst III positions to include performance evaluations, work performance standards, work assignment and review, scheduling, training and discipline and may supervise technical and administrative staff as assigned. The incumbent is responsible for ensuring the provision of timely, efficient, and cost-effective GIS products and services including the development and maintenance of GIS applications, tools, enterprise GIS databases, and linear referencing systems as needed to meet operational and decision support needs.

Manage the design, development, enhancement and delivery of GIS products and services to meet on going and ad hoc business and information needs; manage development and maintenance of geospatial data layers and databases; manage and may participate in the design and development of GIS applications and tools to automate processes and facilitate analyses and reporting; coordinate the delivery of services and sharing of data with other departments and outside entities; research alternatives and recommend appropriate, cost effective technology solutions.

Oversee and participate in the design, development, integration and maintenance of GIS database architectures, data layers and databases; perform highly complex analytical projects, including spatial and other analyses and forecast modeling; analyze, research, develop, implement and maintain processes for enhancing the utilization of GIS technologies and solutions to support internal business requirements and GIS initiatives; work with staff in the planning, design, development, configuration, testing, implementation and maintenance of large-scale GIS applications and web portals, backend processing modules and associated data layers and databases; develop, implement and monitor work plans to achieve goals and objectives.

Analyze and evaluate technology solutions to ensure their consistency and integration with technology standards; participate in developing enterprise GIS policies, standards and procedures; serve as an expert resource and provide advice to agency staff and other departments or agencies on complex GIS technical issues; may serve on steering committees and advisory groups to foster cooperation and ensure consistent practices for storage, sharing, maintenance and utilization of geospatial data; write reports and prepare custom maps and other GIS products.

Participate in the preparation and evaluation of proposals, bids, contracts and service agreements for GIS software, equipment and consulting services; may administer contracts; develop or assist in the development of the GIS budget; monitor expenditures against budget; participate in the development, implementation and evaluation of goals and objectives; supervise and oversee development, implementation and evaluation of programs, work processes, systems, policies and procedures to achieve annual goals, objectives and work standards; serve as a technical expert to departmental, district, and divisional managers and advises on the design and uses of GIS technologies and products that will improve business process efficiency and enhance support for decision and policy making. This is the managerial level in the series.

GIS Analyst III: Under general direction, incumbents perform the full range of duties outlined in the series concept and function as technical expert and project manager over either: design, development, testing, implementation and maintenance of large-scale or highly complex departmental and/or divisional GIS software

GIS ANALYST IV	40 **B** 6.343
GIS ANALYST III	38 **B** 6.342
GIS ANALYST II	36 **B** 6.341
GIS ANALYST I	33 **B** 6.340
GIS ANALYST TRAINEE	31 **B** 6.339

Page 3 of 6

CLASS CONCEPTS (cont'd)

GIS Analyst III: (cont'd)
applications, tools, and backend processing modules; **OR** data management projects, and associated data layers and databases. Incumbents review GIS products for accuracy, completeness and aesthetics and for compliance with customer requirements; evaluate GIS technologies and solutions; develop policies, standards and procedures; develop plans and approaches to meet project objectives; oversee or perform complex technical work associated with projects and ongoing assignments; guide and mentor other GIS professionals and/or those utilizing GIS; develop training materials and conduct training for GIS professionals and/or other staff as assigned; and supervise a staff of lower level GIS Analysts. This is the supervisory level in the series.

GIS Analyst II: Under general supervision, incumbents perform the full range of duties outlined in the series concept and participate in design, testing, implementation and maintenance of GIS software applications, tools, data management projects, and associated data layers and databases. Incumbents perform spatial analyses such as buffering, spatial overlays and distance calculations using established methods and procedures; assist in the evaluation of GIS technologies and solutions and the development of GIS policies, procedures and standards. This is the journey level in the series.

GIS Analyst I: Under [close] *general* supervision, incumbents [continue to receive training in performing] *perform some of* the duties described in the series concept *in a more limited manner as determined by the agency. Some positions are permanently allocated to this level in the series and do not provide for automatic progression to the next level in the series. This is the sub-journey level in the series.* [This is the continuing trainee level in the series and progression to the next level may occur upon meeting minimum qualifications, satisfactory performance, and with the recommendation of the appointing authority.]

GIS Analyst Trainee: Under close supervision, incumbents receive training in performing the duties described in the series concept. This is the trainee level in the series and progression to the next level may occur upon meeting minimum qualifications, satisfactory performance, and with the recommendation of the appointing authority.

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MINIMUM QUALIFICATIONS

INFORMATIONAL NOTE:

* Certification as a Geographic Information Systems Professional (GISP) from the GIS Certification Institute is equivalent to one year of work experience.

GIS ANALYST IV

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and four years of professional GIS experience which included GIS/GPS data collection, analysis and validation; GIS software application development; and/or cartographic design. Two years of this experience must have also included project management in one or more of the following: spatial database development and management, GIS application development, and/or GIS application server administration; **OR** an Associate's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and five years of professional GIS experience as described above; **OR** graduation from high school or equivalent education and six years of professional GIS experience as described above; **OR** one year of experience as a GIS Analyst III in Nevada State service; **OR** an equivalent combination of education and experience as described above. *(See Informational Note)*

GIS ANALYST IV	**40**	**B**	**6.343**
GIS ANALYST III	**38**	**B**	**6.342**
GIS ANALYST II	**36**	**B**	**6.341**
GIS ANALYST I	**33**	**B**	**6.340**
GIS ANALYST TRAINEE	**31**	**B**	**6.339**

MINIMUM QUALIFICATIONS (cont'd)

<u>GIS ANALYST IV</u> (cont'd)

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at the time of application):
Detailed knowledge of: capabilities and functionality of at least one major GIS software suite; enterprise database management systems; project management techniques and/or software application development methodologies; two or more general purpose programming or scripting languages; critical spatial and non-spatial datasets. **Working knowledge of:** GIS system architecture design and planning; multiple enterprise database management systems and/or linear referencing and dynamic segmentation. **Ability to:** develop and prioritize task lists and resolve problems; supervise and mentor assigned staff; *and all knowledge, skills, and abilities required of the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
Detailed knowledge of: State and departmental regulations and policies concerning information security, purchasing and personnel administration; critical departmental spatial and non-spatial datasets and their relationship to the enterprise GIS system; application of linear referencing and dynamic segmentation techniques to GIS data; major state and federally mandated reporting requirements that include or rely upon GIS data.

<u>GIS ANALYST III</u>

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and three years of professional GIS experience which included GIS/GPS data collection, analysis and validation; GIS software application development; and/or cartographic design. One year of this experience must have also included one or more of the following: spatial database development and management, GIS application development, and/or GIS application server administration; **OR** an Associate's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and four years of professional GIS experience as described above; **OR** graduation from high school or equivalent education and five years of professional GIS experience as described above; **OR** one year of experience as a GIS Analyst II in Nevada State service; **OR** an equivalent combination of education and experience as described above. *(See Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at the time of application):
Detailed knowledge of: structured query language (SQL); spatial data validation techniques; spatial topologies; GIS analysis tools; multi-user GIS editing workflows. **Working knowledge of:** linear referencing and dynamic segmentation and/or server and web-based GIS technologies; mobile GIS technology and GPS data collection; enterprise spatial databases and database security; map services. **Ability to:** create GIS software add-ins and stand-alone programs or web mapping applications or write moderately complex scripts to automate GIS processes; install and administer spatial databases; install and administer GIS application server software and publish map services; integrate non-spatial data with the enterprise linear referencing system and/or related GIS systems and dynamically segment data; automate routines to make corrections to improve database quality; develop geospatial data structures to model complex interrelated geographic features; lead highly complex GIS development and maintenance projects; manage and perform highly complex analytical projects; serve as an expert resource to other GIS specialists and end users; *and all knowledge, skills, and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills, and Abilities for GIS Analyst IV.)

GIS ANALYST IV	40	**B**	**6.343**
GIS ANALYST III	38	**B**	**6.342**
GIS ANALYST II	36	**B**	**6.341**
GIS ANALYST I	33	**B**	**6.340**
GIS ANALYST TRAINEE	31	**B**	**6.339**

Page 5 of 6

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MINIMUM QUALIFICATIONS (cont'd)

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GIS ANALYST II

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and two years of professional GIS experience which included GIS/GPS data collection, analysis and validation; GIS software application development; and/or cartographic design; **OR** an Associate's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and three years of professional GIS experience as described above; **OR** graduation from high school or equivalent education and four years of professional GIS experience as described above; **OR** one year of experience as a GIS Analyst I in Nevada State service; **OR** an equivalent combination of education and experience as described above. *(See Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):
Detailed knowledge of: basic GIS software functionality, spatial relationships; theories, principles, and concepts related to GIS technology; geoprocessing and editing tools, and spatial data validation techniques; GIS analysis tools. **Working knowledge of:** spatial topologies; structured query language (SQL); cartographic principles, map projections and coordinate systems. **General knowledge of:** map services; enterprise spatial databases; multi-user GIS editing workflows; linear referencing and dynamic segmentation; mobile GIS technology and GPS data collection. **Ability to:** collect user requirements and design GIS datasets/databases that includes data validation and quality assurance mechanisms; solve moderately complex GIS problems; differentiate between common GIS- and IT-related problems; write basic scripts to automate GIS processes; effectively train and mentor low-level users and end users in the use of GIS Software; solve moderately complex GIS software problems and assist end users with second-level technical support; perform moderately difficult spatial analyses; *and all knowledge, skills, and abilities required at the lower levels.*

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills, and Abilities required for GIS Supervisor.)

GIS ANALYST I

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and one year of professional GIS experience which included GIS/GPS data collection, analysis and/or validation; GIS software application development; and/or cartographic design; **OR** an Associate's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field and two years of GIS experience as described above, to include at least one year of professional GIS experience; **OR** graduation from high school or equivalent education and three years of GIS experience as described above to include at least one year of professional GIS experience; **OR** an equivalent combination of education and experience as described above. *(See Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):
Working knowledge of: basic GIS software functionality; spatial relationships; theories, principles, and concepts related to GIS technology. **General knowledge of:** basic cartographic principles, map projections and coordinate systems; sources of information and research techniques; problem-solving methods. **Ability to:** create a map layout suitable for printing, edit GIS data, perform spatial and attribute queries, label features on a map; solve simple GIS software problems and assist end users with first-level technical support; understand and utilize computer systems and GIS software; make mathematical and statistical computations including addition, subtraction, multiplication, division and algebra; establish and maintain effective working relationships with others; *and all knowledge, skills, and abilities required at the lower level.*

GIS ANALYST IV	**40**	**B**	**6.343**
GIS ANALYST III	**38**	**B**	**6.342**
GIS ANALYST II	**36**	**B**	**6.341**
GIS ANALYST I	**33**	**B**	**6.340**
GIS ANALYST TRAINEE	**31**	**B**	**6.339**

MINIMUM QUALIFICATIONS (cont'd)

GIS ANALYST I (cont'd)

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills, and Abilities required for GIS Analyst II.)

GIS ANALYST TRAINEE

EDUCATION & EXPERIENCE: Bachelor's degree from an accredited college or university in geographic information systems, geography, cartography, computer information systems, or a closely related field; **OR** an Associate's degree from an accredited college or university in geographic information systems, geography, cartography, computer science, computer information systems, or closely related field and one year of paraprofessional GIS experience which included GIS/GPS data collection, analysis and/or validation; GIS software application development; and/or cartographic design; **OR** graduation from high school or equivalent education and two years of experience as described above; **OR** an equivalent combination of education and experience as described above. *(See Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):
Working knowledge of: theories, principles and concepts related to Information Technology (IT) or GIS technology. **General knowledge of:** basic GIS principles and practices; sources of information and research techniques related to GIS; problem-solving methods; mathematical and statistical computations; English language sufficient to write grammatically correct business correspondence. **Ability to:** communicate effectively both verbally and in writing; analyze data and reach logical conclusions; write grammatically correct business correspondence; read and understand technical information.

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills, and Abilities required for GIS Analyst I.)

This class specification is used for classification, recruitment, and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this series.

	6.343	6.342	6.341	6.340	6.339
ESTABLISHED:	3/07/13R	3/07/13R	3/07/13R	3/07/13R	5/13/19UC
	6/18/15UC	6/18/15UC	6/18/15UC	6/18/15UC	
REVISED:	5/13/19UC	5/13/19UC	5/13/19UC	5/13/19UC	
				X/X/XXUC	