

MEMORANDUM

State of Alaska
Department of Administration
Division of Personnel

To: Kimberley King
Human Resource Manager
Department of Health and Social Services

Date: April 24, 2003

Heather Kinzie
Human Resource Manager
Department of Environmental Conservation

Lynn Ate
Human Resource Manager
Department of Fish and Game

Fran Kinney
Human Resource Manager
Department of Public Safety

Thru: Lee Powelson
Classification Manager

From: Keith Murry, HR Specialist, DOP
Diane Larocque, HR Specialist, DOP
Jackie Dailey, HR Specialist, H&SS
Nancy Hopson, HR Specialist, DEC

Phone: 465-4074

Fax: 465-2576

Email: keith_murry@admin.state.ak.us

Subject: Microbiologist/Laboratory Technician Study

Introduction:

The Division of Personnel conducted a classification study of the Microbiologist series, Laboratory Technician series, and the Chief, Public Health Laboratories job class. At the request of the Department of Environmental Conservation, the scope was expanded to include the Environmental Microbiologist series, Environmental Laboratory Technician job class, and the requested re-establishment of the Chief, Environmental Health Laboratory job class.

Class History:

Laboratory Assistant I (P9010-SR6) was established November 10, 1967 for positions performing routine and unskilled laboratory housekeeping and processing duties. The Examples of Duties were revised on May 1, 1972 to add work performed in the Department of Natural Resource's mineralogy lab. On November 16, 1978 the minimum qualifications were revised to the less restrictive qualifications required by the Laboratory Aide.

No information on the creation of Laboratory Aide (P9009-SR5) is available. The class was abolished on November 16, 1978 because the duties and responsibilities significantly overlapped the Laboratory Assistant I (P9010-SR6), and separate classes were not supported.

Laboratory Assistant II (P9011-SR8) was established March 5, 1968 for positions leading other Laboratory Assistants while assisting bacteriologists, chemists, microbiologists, and others in preparation of reagents and culture media and in other routine laboratory functions and examinations.

Environmental Laboratory Technician (P8303-SR12) was established May 16, 1986 for positions in the Department of Environmental Conservation's Food Safety Laboratory performing duties above the Laboratory Assistant II level, but not at the level of the professional Microbiologist I. The class was established at range 12 based on internal alignment with other technical level classes. The class has had no subsequent revisions.

Laboratory Technician I (P5615-SR10) and Laboratory Technician II (P5616-SR12) were established on July 16, 1992 after a review of positions in the Public Health Laboratories. These classes replaced Laboratory Assistant I and II which were abolished August 16, 1992. The Laboratory Technician I was established as the basic working level for positions performing recurring tasks under close supervision not directly involved in processing and testing of human specimens. The Laboratory Technician II was established as the full working level for positions independently performing a limited scope of tests and procedures directly involved in the testing of human clinical specimens. The minimum qualifications reflected the criteria established by the Clinical Laboratory Improvement Act of 1988. The ranges were assigned based on internal alignment of the full working level with other technical level classes. The minimum qualifications for Laboratory Technician I were revised March 31, 1998. The minimum qualifications for Laboratory Technician II were revised October 18, 1998.

The Microbiologist series was in use prior to May, 1961. No record of the creation of the series is available. On October 10, 1967 the series was revised. The new series included Microbiologist I (P5625-SR14) defining positions responsible for performing a limited number of repetitive laboratory tests under immediate supervision; Microbiologist II (P5626-SR16) defining positions performing routine and standard tests under general supervision; Microbiologist III (P5629-SR18) defining positions responsible for supervising, planning, and performing difficult and exacting public health laboratory work under general professional direction; Microbiologist IV (P5630-SR20) defining positions responsible for management and supervision of a regional Public Health laboratory; and Microbiologist Trainee (P5624-SR12) on which no information is available. The minimum qualifications for Microbiologist I were revised on February 8, 1968 and December 2, 1968.

On August 1, 1971 a new Microbiologist series was implemented and the previous series abolished. The new series included Microbiologist I (P5610-SR13), Microbiologist II (P5611-SR15), Microbiologist III (P5612-SR17), and Microbiologist IV (P5613-SR20). The changes made included the combining of the previous Microbiologist III and IV into a single supervisory class (Microbiologist IV) and retitling the Microbiologist Trainee to Microbiologist I, the Microbiologist I to Microbiologist II, and the Microbiologist II to Microbiologist III.

On April 16, 1982 the minimum qualifications for all levels were revised and the salary ranges for the Microbiologist I, II, and III changed to 14, 16, and 18, respectively. No changes were made to the Microbiologist IV (P5613-SR20). The minimum qualifications for Microbiologist I were again revised on February 2, 1983 and May 31, 1984. A note clarifying educational requirements for the series was added October 12, 1998. No further revisions to the Microbiologist series has been made.

Chief, Public Health Laboratories (P5648-SR24) was established October 10, 1967 replacing the Chief, Branch of Laboratories job class. No information on the older class is available. The class defined a single position responsible for overall planning and administrative direction of Public Health laboratories throughout the state. Unidentified revisions were made on February 8, 1968 and February 5, 1969. The supervisory language in the class definition was revised on September 1, 1978. The class was rewritten and the minimum qualifications changed on April 16, 1979. The minimum qualifications were again revised on October 16, 1979. On April 9, 1980 the salary was changed at the request of the Department of Health and Social Services from range 24 to range 23. The minimum qualifications were further revised on February 16, 1987 and November 8, 1993. There have been no subsequent revisions to the job class.

Environmental Microbiologist I and II were established April 1, 1990. The analysts studying the positions determined the differences in duties, responsibilities, knowledge, and skills required in performing environmental testing in the Department of Environmental Conservation's Palmer laboratory were sufficiently different from public health to justify separate job classes. The Environmental Microbiologist I (P5620-SR14) defined positions performing standard, recurring tests under close supervision. The Environmental Microbiologist II (P5621-SR16) defined positions performing a broad spectrum of microbiological tests under general supervision. The classes were revised on April 16, 1994 and a new level in the series established, Environmental Microbiologist III (P5619-SR18), defines a position performing advanced level work and supervising other employees. No further changes to the job classes have been made.

Chief, Environmental Health Laboratory (P5622-SR22) was established April 1, 1990 concurrent with the creation of the Environmental Microbiologist series. The class defined a single position responsible for administration and management of the Environmental Microbiology Laboratory (now the Food Safety Laboratory). On June 1, 1994 the only position in the class was reclassified to Environmental Conservation Manager III (P8315-SR23). As there were no positions allocated to the Chief, Environmental Health Laboratory job class, it was abolished on July 30, 1994.

Study Scope:

This classification study included all positions allocated to the Laboratory Technician I & II, Environmental Laboratory Technician, Microbiologist I-IV, Environmental Microbiologist I-III, and the Chief, Public Health Laboratories job classes. These classes cover paraprofessional and professional positions in the Department of Health and Social Services, Division of Public Health; Department of Environmental Conservation, Division of Environmental Health; Department of Fish and Game, Division of Commercial Fisheries; and Department of Public Safety, Scientific Crime Detection Laboratory. Also included were one Environmental

Conservation Manager III which administers DEC's Environmental Health Laboratories programs and one Fish and Wildlife Technician IV in the Department of Fish and Game's Anchorage Fish Pathology Laboratory.

Study Method:

Updated Position Descriptions were received for all positions included in the study. A team of classification analysts was assembled from the Division of Personnel, Department of Health and Social Services, and Department of Environmental Conservation. The Department of Public Safety and Department of Fish and Game chose not to be represented on the study team.

The departments identified subject matter experts (SMEs) and the SMEs from the Departments of Health and Social Services, Environmental Conservation, and Fish and Game gave presentations to classifiers on the work performed in their departments and the areas of concern which they believed could be addressed by the classification study.

The study team read the position descriptions, researched other occupational information, and identified areas of work that could be used to determine the appropriate groupings of positions into job classes. The team conducted on-site interviews with employees in representative positions in each of the laboratories covered by the study and the supervisors and managers. After analyzing the information gathered against the factors used in the state's whole job classification system for allocating positions to a job class and the criteria for grouping positions into job classes, the team developed class concepts for the resulting classes. The draft definitions and distinguishing characteristics were distributed to the SMEs for review and a meeting held for the SMEs to present their comments, suggestions, and concerns to the classifiers. After revising the draft definitions and distinguishing characteristics to address the SMEs comments, a test allocation session was held with departmental classification analysts. The draft definitions and distinguishing characteristics were further revised based on the comments received in the test allocation session. The Examples of Duties, Knowledge, Skills and Abilities, and Minimum Qualifications sections of the class specifications were drafted and distributed to the study SMEs and Human Resource Managers for review and comment. After reviewing the comments, the study team made final revisions to the class specifications.

The study team reviewed each position included in the study and drafted allocation analyses. The results of draft analyses were provided to management with an opportunity to provide additional class controlling information which could impact position allocations. The team reviewed the information and determined the appropriate allocation of the position.

The new classes were analyzed for internal alignment in accordance with the state's pay policy and appropriate salary ranges determined. The study memo was finalized and the results of the study submitted to the Director of the Division of Personnel for implementation.

Class Analysis:

Microbiology deals with the scientific study of the characteristics and life processes of microorganisms, the interrelationships among organisms, their relationships to other life forms, and their reactions to the environments in which they are found. Microbiologists work with protozoa, bacteria, fungi, viruses, parasites, and similar microscopic and macroscopic organisms

in fields such as immunology, parasitology, physiology, serology, genetics, taxonomy, and cytology as they relate to microorganisms. Microbiologists study the form, structure, reproductive processes, genetics, and cytology of microorganisms and the products of their chemical activities; the distribution of microorganisms in natural and man-made environments; the reaction of organisms to physical and chemical factors in the environment; their role as pathogenic and immunizing agents; and their isolation, cultivation, identification, and systematic classification.

Microbiologists work in a laboratory environment. In state government the work is primarily concentrated in two categories: 1) Public Health Laboratories, and 2) Regulatory and Control Laboratories. Microbiologists in Public Health Laboratories conduct a variety of tests to isolate and identify microorganisms, toxins, or products produced by microorganisms from tissues, body fluids, excreta, or lesions; conduct sensitivity tests; and perform other procedures to diagnose and control diseases caused by pathogenic microorganisms. Regulatory and Control work involves testing items such as food products to see that they conform to legal standards for purity, potency, and safety. This work is also concerned with establishing standards and with inspecting facilities that produce biological products and private laboratory testing facilities for conformance with approved methods and procedures.

The state's microbiologists work in five separate laboratories. The Department of Health and Social Services, Division of Public Health (DPH), has two of the laboratories, one in Anchorage and one in Fairbanks. The microbiologists in the Fairbanks Public Health Laboratory, until recently, had specialized in the isolation and identification of viruses. The microbiologists in the Anchorage Public Health Laboratory, until recently, specialized in all areas of public health microbiology except virology. As a result of the changes brought about by national security concerns, the two DPH laboratories are establishing an overlap and backup for all areas of public health microbiology in both laboratories.

The Public Health Laboratories serve as reference laboratories for the medical community. The result of this role is that the unusual and difficult to identify pathogens are the normal workload of the laboratory. The tests which are easily conducted and interpreted are normally performed by the staff in a private medical laboratory. When a medical laboratory is unable to identify a pathogen or does not have the capability of conducting a complicated, multiple-procedure, time-intensive test, the specimen is sent to the Public Health Laboratory for testing. The tests conducted by the Public Health Laboratory are directly related to the diagnosis and treatment of a patient and require speed in their conduct and extreme care and accuracy in their interpretation.

The Department of Environmental Conservation, Division of Environmental Health's Food Safety Laboratory is in Palmer. (A replacement laboratory is planned in Anchorage but this is not expected to change the organizational make-up or duties of the microbiologists.) The microbiologists in the Food Safety Laboratory reduce and prevent human exposure to pathogens by performing microbiological tests to isolate and identify regulated microorganisms, toxins, or products of microorganisms in drinking water, food and dairy products, and shellfish and shellfish growing waters. The microbiologists also enforce state and federal regulations covering testing of consumable products, sale of contaminated products, and sale or export of shellfish.

The Department of Fish and Game, Division of Commercial Fisheries, uses microbiologists in both the Anchorage and Juneau Fish Pathology Laboratories. The microbiologists in the Fish Pathology Laboratories conduct a variety of tests to isolate and identify microorganisms, toxins, or products of microorganisms in fish and shellfish. The information provided by microbiologists is used by Fish Pathologists to determine health status of fish stocks, causes of fish die-offs, and to enforce regulations concerning the introduction or transport of diseased or contaminated fish into new areas or release into the wild.

The Public Health Laboratories in Fairbanks and Anchorage have the same organizational design. The majority of the professional staff are concerned with the day-to-day benchwork required in the laboratory. (Benchwork is the practical, direct manipulation of specimens, solutions, reagents, and equipment required to set up, conduct, analyze, and evaluate laboratory tests.) These staff rotate through each specialty area of the laboratory to maintain their knowledge and skill in a broad spectrum of public health microbiological testing. The laboratories each have a requirement for positions which provide a special expertise in a specific area of microbiology. Staff in these positions do not rotate through other specialties but provide guidance and special training to the staff rotating through their specialty area. These "Subject Matter Experts" in a microbiological specialty also develop and perform tests to isolate and identify pathogens when the normal testing procedures fail. Each of the laboratories has one position responsible for managing the laboratory operations, coordinating the work of the different specialties, and establishing the overall laboratory goals and procedures.

The organizational structure of the Department of Environmental Conservation's Food Safety Laboratory is similar. The majority of the staff are concerned with the day-to-day benchwork required in the laboratory. One of the differences is that, instead of needing positions with an in-depth knowledge of a microbiological specialty area, the Department requires some positions to have an in-depth knowledge of specific regulatory programs. Thus, instead of having a position needing an extensive knowledge of virology, the department has a position requiring an extensive knowledge of the regulations and requirements of the state and federal drinking water programs. As a result of the limited number of staff in the laboratory, the regulatory requirements of inspections and certifications, and the need for producers to get products to market quickly, the laboratory requires that the staff be able to step in when a specialist in a specific program is absent and perform the required work.

The organization of the Department of Fish and Game's Fish Pathology Laboratories differs from the Public Health and Environmental Health Laboratories primarily in size and specialty. In the Fish Pathology Laboratories, the microbiological examinations are conducted to support the work of Fish Pathologists. The Fish Pathologists provide the expertise in diagnosis and treatment of fish diseases and exercise the regulatory authority of ordering the destruction of fish stocks when required.

The work performed by the microbiologists in each of these laboratories appears similar. They all cultivate organisms using similar procedures, use similar staining processes, and use similar microscopes and equipment to view, analyze, and identify pathogens. In some cases they are even looking for the same pathogens. The work in the laboratories differs in that the Public

Health Laboratories are routinely required to detect the presence of, and identify, unknown pathogens active in a human patient and requires determining the appropriate testing procedures as well as modifying procedures when tests are inconclusive. The Food Safety Laboratory primarily searches for specific pathogens or antibodies using testing methods required by regulations. The Fish Pathology Laboratories both search for previously identified pathogens and perform examinations to detect and identify unknown pathogens in fish and shellfish.

The state's criteria for grouping positions into job classes requires positions which are sufficiently similar with respect to duties and responsibilities, degree of supervision exercised and received, and entrance requirements so that: 1) the same title can be used to clearly identify each position; 2) the same minimum qualifications for initial appointment can be established for all positions; 3) the same basic rate of pay can be fairly applied to all positions; and 4) employees in a particular class are considered an appropriate group for purposes of layoff and recall.

Comparisons of the journey level positions under the eight classification factors in whole job classification indicates the differences of the public health positions with regard to variety and complexity of work; initiative and originality required; and qualifications required are such that the positions fail all criteria for grouping with the other microbiologist positions. The differences between the journey positions in the Environmental Health and Fish Pathology Laboratories in scope, variety, and complexity of testing; initiative and originality required; and qualifications required are not such that the positions fail to meet the criteria for grouping into positions. Comparisons of the higher level classes indicated the differences between the public health positions and other positions increased with each successive increase in difficulty and responsibility. As a result of these comparisons two professional class series were developed, one series specific to the Public Health Laboratories, the other covering general microbiological positions in Environmental Health and Fish Pathology.

The **Public Health Microbiologist series** includes three levels: journey, advanced/subject matter expert, and laboratory manager.

Public Health Microbiologist I is the journey level of the series. At this level incumbents perform scientific testing in a variety of microbiological specialty areas in a state public health laboratory to provide accurate and timely identification of pathogenic organisms to hospitals, clinical laboratories, and health care providers in support of the state public health programs. The primary purpose and focus of journey level positions is the benchwork required in the laboratory.

Public Health Microbiologists II is the advanced/subject matter expert level in which incumbents provide guidance, trouble shooting, and develop and evaluate new methods, procedures and tests in a specific area of public health microbiology. These positions provide advice and guidance to lower level microbiologists and Laboratory Technicians, consult with providers, recommend tests to identify pathogens based on health care provider's report of clinical symptoms, ensure the quality and accuracy of tests conducted in their specialty, area and recommend to management changes to laboratory

policies and procedures, the adoption of new methods/procedures, budget, acquisition of new equipment and testing materials.

Public Health Microbiologist III is the first managerial level of the series. At this level incumbents manage the operations of a Public Health Laboratory; supervise staff; coordinate operations in each specialty area of the laboratory; determine staffing needs and assignments; manage the laboratory budget; ensure safety and security of pathogens received or stored; ensure safety, quality control and quality assurance procedures are followed; develop policies and procedures required for laboratory operations.

Due to operational requirements, staffing levels, and limited basic training and development capabilities, entry level professional positions do not currently exist in the Public Health Laboratories. Should circumstances change and entry positions be created, the positions would appropriately be placed in the entry level of the general Microbiologist series. This would allow a broad pool of candidates who could be reasonably expected to develop the skills and knowledge required for advancement into the Public Health Microbiologist series.

The **Microbiologist series** includes three levels: entry, journey, and advanced/supervisory.

Microbiologist I is the entry level of the series in which incumbents conduct, analyze, and evaluate routine, standard microbiological tests requiring professional knowledge of principles and theory to determine the causes or possible significance of abnormalities; to alter procedures and techniques to correct problems; and to correlate and interpret results based on an understanding of the underlying phenomena and relationships.

Microbiologist II is the journey level of the series. At this level incumbents independently perform a variety of microbiological scientific testing. The primary purpose and focus of journey level Microbiologists is the benchwork required in the laboratory. Incumbents also document testing procedures, controls, and results; maintain and calibrate equipment; conduct quality control and assurance testing; and assist higher level staff in inspecting laboratories or production facilities.

Microbiologist III is the advanced level at which incumbents, as subject matter experts in a regulatory program (such as drinking water or dairy), inspect the operations of the laboratories or producers or retailers of consumables; certify or decertify commercial or private laboratories; train and provide guidance and advice to lower level microbiologists and laboratory technicians; evaluate procedures in their programmatic area; and recommend and implement program or policy changes.

Analysis of the scope and level of administrative and managerial duties assigned to one of the positions in the Food Safety Laboratory indicated the responsibilities assigned and exercised were not sufficient to require creation of a managerial level in the series.

The paraprofessional positions in the study perform work in the Public Health Laboratories in Anchorage and Fairbanks, Environmental Health's Food Safety Laboratory in Palmer and Chemistry Laboratory in Juneau, the Fish Pathology Laboratory in Anchorage, and Public

Safety's Scientific Crime Detection Laboratory in Anchorage. The positions perform a variety of tasks which support the laboratory professionals and ensure the professionals have the proper equipment, solutions, media, and reagents to conduct tests on specimens. The care and precision required in preparing and sterilizing solutions, media and equipment ensures the reliability and accuracy of the professional tests.

Comparison of the paraprofessional positions in the Public Health, Environmental Health, and Fish Pathology Laboratories reveals significant similarities in the scope and level of duties, independence required, and knowledge, skill, and ability required. Analysis indicated the laboratories had differences in procedures followed, but the differences in independence, scope and variety of duties, and knowledge, skills and abilities required were not so great that the positions failed to meet the criteria for grouping into job classes. While the scope and variety of duties could be assigned in a way that supported separate levels of paraprofessional, none of the laboratories were organized in a way that reflected this separation. In each of these laboratories staffing levels dictate that each paraprofessional perform the full gamut of duties as the workload requires. As a result, we have created a single level paraprofessional job class, Laboratory Technician.

Laboratory Technician is a paraprofessional job class in which incumbents maintain equipment, supplies, solutions and cultures; perform quality control on equipment, solutions, and reagents; conduct routine tests for which procedures are clearly defined; and assist professional laboratory staff in setting up laboratory tests, preparing specimens for testing, and cleaning equipment when the tests are completed.

Comparison of the paraprofessional work in the laboratories revealed significant differences between the Scientific Crime Detection Laboratory and the other laboratories. In the Crime Lab the paraprofessional positions are required to participate in evidence location, identification, and collection at the scenes of violent crimes and serious accidents; to ensure chain of custody for evidence; and to testify in court on evidence control procedures. As a result of the differences in the nature of the duties performed, and the knowledge, skills, and abilities required these positions are not clearly identified by the same title and given the same minimum qualifications as the other paraprofessional positions, nor are the employees an appropriate group for layoff or recall. A separate job class, Forensic Technician, has been created. As currently organized the positions in the Crime Lab are performing the same scope of duties with similar levels of responsibility which supports a single level job class.

Forensic Technician is a paraprofessional job class in which incumbents assist in identification and collection of evidence at crime scenes; ensure the security and chain of custody for evidence; maintain and calibrate laboratory analytical equipment; conduct routine standard laboratory testing for which procedures are well established and results are easily determined; and assist professional staff in setting up laboratory tests, preparing evidence for testing, and cleaning equipment when the tests are completed.

Management of the Crime Lab has indicated that the organization of the laboratory is being examined and that the duties of the paraprofessionals may change as part of a reorganization of the professional staff. Management has also requested a classification study of the professional

staff in the Crime Lab. We recommend that the study of the professional positions include a reexamination of the paraprofessional positions and include the paraprofessional staff in the Medical Examiner's office which may be appropriately grouped with the paraprofessionals in the Crime Lab.

The Chief, Public Health Laboratories job class defines a single position responsible for administering and managing the Public Health Laboratories programs. This position provides overall expert consultation, program guidance and serves as the state's liaison and resource for the federal Center for Disease Control and other states' public health organizations. The position works with department management on legislation and regulations covering public health and with division management to monitor and responds to public health issues and emergencies. The specialized knowledge and levels of responsibility and authority continue to support maintaining a separate single-position job class. The class specification has been rewritten to clarify the scope and variety of work, the level of responsibility, and other characteristics of the job.

Chief, Public Health Laboratories is a single position job class responsible for administering and managing the state Public Health Laboratories, Radiological Health, Bio-monitoring, and Toxicology programs. As the Laboratory Director for the Public Health Laboratories Programs, the incumbent provides direction, control, and coordination with the Center for Disease Control and the public health operations of other states. As the Public Health Laboratories Clinical Consultant, the incumbent provides expert consultation and clinical diagnosis and recommendations to health care providers. The incumbent establishes the scope of operations of the Public Health Laboratories within the requirements of state and federal law and works with the division management to coordinate operations with other sections of the Division Public Health and other state, federal, and local agencies.

The Department of Environmental Conservation has a single position responsible for administration and management of the Environmental Health Laboratories programs. The position was reclassified in 1994 from Chief, Environmental Health Laboratory (P5622-Rg22) to Environmental Conservation Manager III (P8315-Rg23). After recent recruitment efforts the department concluded the minimum qualifications for Environmental Conservation Manager III were not providing applicants who could be reasonably expected to succeed in the position. The department submitted a request to reestablish the Chief, Environmental Health Laboratory job class. Analysis of the specialized knowledge specific to microbiology and chemistry required in administering the testing and regulation enforcement performed by the Food Safety Laboratory and Chemistry Laboratory supports separating the position from the general Environmental Conservation Manager series. The levels of authority and responsibility support separating the position from the Microbiologist series. Based on the criteria for grouping positions into job classes, the position responsible for administering and managing the Environmental Health Laboratory programs is appropriately assigned to a single position job class. The Chief, Environmental Health Laboratory has been rewritten to reflect the scope and variety of work performed, the levels of responsibility and authority, the knowledge, skills, and abilities required, and the qualifications required. The title has been changed to better reflect the full scope of responsibility.

Chief, Environmental Health Laboratories is a single position job class responsible for managing and administering the state Environmental Health Laboratories programs. The incumbent establishes program goals and policies; administers the budget; ensures compliance with state and federal regulations; and coordinates program operations with other state and federal agencies.

Internal Alignment:

The state's system of personnel administration is governed by the merit principle and includes "integrated salary programs based on the nature of the work performed." The classification plan provides a grouping together of all positions on the basis of duties and responsibilities. The pay plan is based upon the state's classification plan, provides for fair and reasonable compensation for services rendered, and reflects the principle of "like pay for like work." In achieving this principle, internal consistency is the primary consideration when setting the salary range of a job class. Such internal consistency reflects the difficulty, responsibility, knowledge, skills and other characteristics of a job. To conduct internal comparisons, job classes of a similar nature, kind and level are selected from the same job family and occupational group or related job families. Standard practice is not to include classes whose wages have been adjusted under a pilot program in an internal alignment analysis.

The classes included in this study are in the Laboratory and Technicians job family in the Medical, Public Health, and Related occupational group. The Pharmacist, Pharmacy Assistant, and Medicaid Pharmacy Program Manager were excluded from comparisons as the classes are currently under study. To ensure full consideration of compensable factors comparisons were made to paraprofessional, professional, supervisory, managerial, and administrative classes in the Biological Sciences, Physical Sciences, and Law Enforcement groups.

Classes used for comparison at range 11 include Fish and Wildlife Technician III and Forest Technician III. These are either the journey technical level classes independently performing duties at field sites, in offices, on vessels, or in laboratories or serving as crew leaders; or are either a field crew leader or assistant dispatcher. The minimum qualifications are high school graduation and six months of experience at a lower level of the series.

The class used for comparison at range 12 is Autopsy Assistant. This paraprofessional class assists a Medical Examiner in the performance of autopsies, collects specimens, and catalogs evidence. The minimum qualifications are a year of experience in a medical laboratory or funeral home.

The classes used for comparison at range 13 are Fish and Wildlife Technician IV and Forest Technician IV. These are advanced technical level classes functioning independently, with a high degree of discretion in determining methods, techniques, and equipment used to achieve goals. Incumbents may be responsible for a permanent field facility, research station, or laboratory or serve as a technical assistant to an area management biologist; supervisors of crew leaders, or an area dispatcher. The minimum qualifications are high school graduation plus one year of experience at the journey level or two years of experience with six months at the lead level, respectively.

Classes used for comparison at range 14 are Fish and Wildlife Technician V, Embalmer, Wildlife Biologist I, Fishery Biologist I, Habitat Biologist I, Chemist I, and Geologist I. These are either full supervisory paraprofessional classes with significant discretion which require thorough knowledge of one or more animals and their habitats; a licensed professional; or the entry/trainee professional level of a series performing analytical work under the direction and assistance of higher level professionals. The minimum qualifications for the professional classes are either licensure or a bachelor's degree in the scientific branch of the profession.

The class used for comparison at range 15 is Criminalist I. This is a trainee professional class learning to perform laboratory analyses of physical evidence in law enforcement investigations using testing procedures from multiple biological and physical sciences. The minimum qualifications are a bachelor's degree in one of the sciences covered by the profession.

The classes used for comparison at range 16 include Fish Pathologist I, Wildlife Biologist II, Fishery Biologist II, Habitat Biologist II Agronomist I, Chemist II, and Geologist II. These are the journey professional levels of their series. Positions perform a range of analytical duties characteristic of the scientific field which require creativity, judgement, discretion, and decision-making. The minimum qualifications are a bachelor's degree in the scientific field and one year of professional experience at the entry or trainee level.

The classes used for comparison at range 17 are Fisheries Geneticist I and Criminalist II. These are journey professional classes responsible for designing and conducting one or more research projects or performing a variety of complicated analysis of a broad range of evidence. The minimum qualifications are either a master's degree specific to the field or a bachelor's degree and one year of professional experience.

The classes used for comparison at range 18 include Fish Pathologist II, Wildlife Biologist III, Fishery Biologist III, Habitat Biologist III, Agronomist II, Chemist III, and Geologist III. These are advanced professional level classes. This level is distinguished by substantial project management responsibilities; limited, inadequate, or lack of guidelines for dealing with unusual or controversial problems; unprecedented methodologies or techniques; and extensive interaction with individuals, officials, or groups inside and outside an agency. The minimum qualifications are a bachelor's degree and one or two years of journey professional experience.

The classes used for comparison at range 19 include Fisheries Geneticist II and Criminalist III. These are advanced professional classes which either independently design, plan and conduct major research projects or perform a broad range of analytical tests and serve as an expert witness in all cases involving criminalistic evidence. The minimum qualifications are either a master's degree and one year of specific professional experience, or a bachelor's degree and two years of specific professional experience.

The classes used for comparison at range 20 include Wildlife Biologist IV, Fishery Biologist IV, Habitat Biologist IV, Agronomist III, Chemist IV, and Geologist IV. These are advanced professional classes which are assigned administrative/managerial responsibilities for multiple major, long-term projects or programs requiring considerable planning and coordination of diverse issues and activities with significant impact on state resources and agency operations.

The minimum qualifications are a bachelor's degree or higher and one or more years of advanced professional experience.

The classes used for comparison at range 21 are Chief Curator, Fish Pathologist III, Fish Geneticist III, and Criminalist IV. These are managerial classes which require expertise in a scientific field to supervise the work of other professionals, manage a unit or facility, with responsibility for planning and directing a program or function. The minimum qualifications are commonly an advanced degree and two years of advanced professional experience.

The classes used for comparison at range 22 include Wildlife Scientist I, Fisheries Scientist I, Chemist V, and Geologist V. These are either advanced scientist or administrative classes. The advanced scientist classes require extensive knowledge of theories, principles, and concepts to independently plan and manage expert original research with national and international implications. The administrative classes administer the activities of a major state laboratory facility or geologic field with personal responsibility for multiple major projects and coordinating other project leaders or field personnel. The minimum qualifications are either a doctorate and three years of advanced experience or a bachelor's degree and six years of increasingly professional experience.

The classes used for comparison at range 23 include Forensic Laboratory Supervisor and Geologist VI. These classes either exercise principal responsibility for administering and implementing forensic investigation in the state or serve as deputy director of the Division of Geological and Geophysical Surveys. The minimum qualifications are either a bachelor's degree and six years professional experience with two years supervisory experience, or a master's degree and three years of professional experience.

The classes used for comparison at range 24 include Wildlife Scientist II and Fisheries Scientist II. These are policy level classes with full line authority for all research activities in a multiplicity of areas. The minimum qualifications are a doctorate and three years of research experience at the senior review level.

The Laboratory Technician's level of independence, scope and variety of duties, and required levels of skill and knowledge are higher than is characteristic of the classes at ranges 11 and 12. The level of required knowledge, analysis, and independent judgement are not as high as what characterizes classes at range 14. The level of discretion, methods, techniques and equipment used in meeting goals closely matches the characteristics of classes assigned range 13. Laboratory Technician is appropriately assigned range 13.

The Forensic Technician's level of independence, scope and variety of duties, and knowledge and skills required inside the laboratory are higher than is characteristic of classes at ranges 11 and 12. The work performed outside the laboratory is under closer supervision and closely matches the characteristics of the class at range 12. The level of required knowledge, analysis, and independent judgement are not as high as what characterizes classes at range 14. As the laboratory duties are preponderant, and are the basis for establishing the minimum qualifications, the range assignment is appropriately based on these duties. The level of discretion, methods,

techniques and equipment used in the laboratory closely matches the characteristics of classes assigned range 13. Forensic Technician is appropriately assigned range 13.

The Microbiologist I performs entry professional analytical duties requiring the application of knowledge of a specific field of study. The level of supervision received, scope and variety of duties, and responsibility for decisions closely matches the characteristics of other entry scientific classes assigned range 14. The work does not require learning the procedures of multiple scientific fields as is characteristic of the class assigned range 15. Microbiologist I is appropriately assigned range 14.

Microbiologist II is a journey professional class with responsibility for independently conducting a variety of analytical procedures. The required knowledge, judgement, discretion, and decision-making closely matches the characteristics of classes assigned range 16. The positions do not conduct research projects or perform the variety of complicated analysis characteristic of classes at range 17. Microbiologist II is appropriately assigned range 16.

Microbiologist III is an advanced professional class with responsibility for overseeing a regulatory program. The level of professional knowledge required, program management responsibilities, requirement for dealing with unusual or controversial problems, and extensive interaction with others closely matches the characteristics of classes assigned range 18. The positions are not responsible for independently conducting major research projects or serving as expert witnesses for their profession which characterizes classes at range 19. Microbiologist III is appropriately assigned range 18.

Public Health Microbiologist I is a journey professional class with responsibility for conducting a variety of analytical procedures on human specimens potentially containing highly contagious and fatal pathogens. The required variations in procedures to deal with unknown pathogens, required safety measures to deal with potential hazards, and required level of knowledge of microbial examination of human specimens is greater than is characteristic of classes assigned range 16. The positions in this class are not assigned responsibility for controversial problems or unprecedented methods and techniques which characterize classes at range 18. The scope and variety of analysis, required level of knowledge, and laboratory working conditions closely match those of Fish Geneticist I class assigned range 17. Public Health Microbiologist is appropriately assigned range 17.

Public Health Microbiologist II is an advanced professional level class which, as a subject matter expert in a specialty area of microbiology, oversees all analytical procedures in the specialty, develops new procedures to resolve unusual problems, and has extensive interaction with individuals and groups outside the agency. This matches the characteristics of classes assigned range 18. However, the required level of knowledge and recognized expertise closely matches the classes assigned range 19. As the knowledge and expertise are the basis for the minimum qualifications of the class, and the state's standard practice is to establish a two range interval between class levels, the Public Health Microbiologist II is appropriately assigned range 19.

The Public Health Microbiologist III is a managerial class responsible for the operations of a Public Health Laboratory. The responsibility for facility management, program coordination,

and establishing laboratory goals and policies is greater than is characteristic of classes assigned range 20. The positions do not have the personal responsibility for multiple major projects or field personnel which characterizes classes at range 22. The scope of responsibility for a facility and a program with advanced professional knowledge of a scientific field closely matches classes assigned range 21. Public Health Microbiologist III is appropriately assigned range 21.

The Chief, Public Health Laboratories is an administrative class with responsibility for the state's Public Health Laboratories programs. The scope and level of responsibility for multiple laboratories and related programs is greater than is characteristic of classes assigned range 22. The policy level responsibilities and variety of areas with statewide impact is not as great as is characteristic of classes assigned range 24. The scope and nature of duties, required knowledge and expertise, and breadth of administrative responsibility closely matches the characteristics of classes assigned range 23. Chief, Public Health Laboratories is appropriately assigned range 23.

The Chief, Environmental Health Laboratories is an administrative class with responsibility for the state's Environmental Health Laboratories programs. The scope and nature of duties, required knowledge and expertise, and breadth of administrative responsibility is not as great as characteristic of classes assigned range 23. The scope and level of responsibility, variety of programs administered and facilities managed closely matches the characteristics of classes assigned range 22. Chief, Environmental Health Laboratories is appropriately assigned range 22.

Conclusions:

The duties of positions in the Laboratory Technician I and II classes no longer support separate levels. A single level paraprofessional class, Laboratory Technician, is appropriate. Based on the duties and responsibilities the class is appropriately assigned range 13.

The paraprofessional positions in the State Crime Detection Laboratory are not appropriately grouped with other paraprofessional laboratory positions. A single level paraprofessional class, Forensic Technician, is appropriate for the variety of duties performed by each position. Based on the duties and responsibilities the class is appropriately assigned range 13.

The professional microbiological work performed in state laboratories is appropriately separated into two series, a general series and a separate series performing microbiological examinations of human specimens in a Public Health Laboratory.

The general series, titled Microbiologist, consists of entry, journey, and advanced levels which are appropriately assigned ranges 14, 16 and 18, respectively.

The Public Health series, titled Public Health Microbiologist, consists of journey, advanced, and managerial levels which are appropriately assigned ranges 17, 19 and 21, respectively.

The Chief, Public Health Laboratories requires special knowledge, skills, and abilities which are appropriately established as a single-position job class, assigned range 23.

The Chief, Environmental Health Laboratories requires special knowledge, skills, and abilities which are appropriately established as a single-position job class, assigned range 22.

The new and revised classes are implemented effective May 1, 2003.

The Laboratory Technician I (P5615-SR10), Laboratory Technician II (P5616-SR12), Environmental Laboratory Technician (P8303-SR12), Environmental Microbiologist I (P5620-SR14), Environmental Microbiologist II (P5621-SR16), and Environmental Microbiologist III (P5619-SR18) job classes are abolished concurrent with the implementation of this study.

Position Analysis:

Individual analysis of each position included in this study is being distributed in separate memoranda. A worksheet showing the classification actions taken on all positions is attached.

Attachments:

Final specs

Allocation worksheet