

# TECHNICAL ASSISTANCE – SYSTEM MAINTENANCE STUDY PROCESS

Prepared by the Division of Human Resources in the Department of Personnel & Administration. Revised September 9, 2010.

## GENERAL

A system maintenance study is a structured review of part or all of the state's job evaluation system. Such studies are conducted for many different reasons. A system maintenance study may be conducted to determine whether the class structure is current and adequate, whether established pay grades and relationships are appropriate, and whether specific classes should be revised, abolished, or created. System maintenance studies ensure job classes are grouped and paid consistently. Studies may involve pay grades, an individual class, a single class series or multiple class series. System maintenance studies may also involve an entire occupational group or the entire job evaluation system.

All recommendations to create, amend, or abolish a class are published as “proposed” to provide an opportunity for discussion and comment. No individual position may be assigned (“allocated”) to a proposed class until the class is approved as final and implemented. All proposed and final changes are provided to human resource administrators (as agents of the employer), who are responsible for distributing the information within their respective departments or higher education institutions (departments) assuring that appointing authorities have information so they can notify directly affected employees. All proposed and final changes are published on the Division of Human Resources’ (the division) Web site at [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr).

System maintenance studies take effect on a date approved by the state personnel director. The effective date must meet statutory and procedural requirements, including consideration of fiscal impact issues. Studies with fiscal impact are reported in the annual compensation report.

Colorado uses broad-based class series. Some of the advantages of broad classes include ease of cross training, greater mobility within the system, and flexibility of assignments and staff deployment. In addition, fewer resources are required to maintain and administer the job evaluation system. The class descriptions identify the nature and character of occupational areas and identify general characteristics of positions as they relate to particular levels in a class series. Class descriptions are not individual job descriptions. Consequently, all positions that belong in a class are not precisely identified or described. As a class often uses a general title and covers a wide range of individual jobs, the use of working titles is encouraged, especially with job announcements.

Reference is made in this document to “meet and confer.” This is a formal process required in statute for system maintenance studies. “Meet and confer” means to provide an opportunity for an open exchange of information and viewpoints, which are considered before a study is implemented. Although formal “meet and confer” is also required for the annual compensation survey, the decision to use a similar process for surveys conducted by the division that are part of a study is at the sole discretion of the division. It occurs at different times depending on whether the activity is a survey

or a study. If the compensation specialist decides to use a process similar to “meet and confer” in a study, it will occur before the survey is conducted. For studies, it must occur before the final results of a study are implemented. The formal “meet and confer” process does not preclude other communication activities that typically occur during studies. The division typically initiates the “meet and confer” activity in order to keep the process consistent and manage resources efficiently. “Meet and confer” can take a number of forms, including public meetings, electronic communication (e.g., teleconference or fax), telephone conversations, written communication (including email), or any other means of communication. Detailed information on the “meet and confer” process for salary and benefit surveys is contained in a separate document available at [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr).

## **INDICATORS A SYSTEM MAINTENANCE STUDY IS NEEDED**

Some indicators for conducting a system maintenance study are listed below.

- A trend that pay is out of alignment when considering factors such as the following:
  - the amount is at least +/-7.5 percent from the prevailing labor market;
  - the difference from one year to the next is stable or growing;
  - the difference continues for several survey cycles;
  - the degree of comparability between the labor market and the class when it is a survey class;
  - historical internal pay relationships that exist between the classes and other related classes; and/or,
  - significant trends or differences in market pay practices.
- Market conditions (such as documented difficulty recruiting or retaining employees).
- The concept of classes is not clearly distinguishable from other classes:
  - classes could be consolidated;
  - factors differentiating levels are inappropriate or frequent use of factor tradeoffs is reported throughout the system; or,
  - changing occupations create a need for a new or revised class or series.

## **SPECIAL TYPES OF STUDIES**

Two types of studies are conducted routinely or systematically.

*Elimination of vacant classes.* This study is done annually, or as needed, to eliminate classes that are no longer used. Information is taken from a personnel system database and a list of vacant classes is generated. The list is sent to all human resource administrators, who are asked to comment on whether the classes are needed. Comments are considered and the list is revised and proposed for abolishment.

*Consolidation.* Consolidation studies are done by occupational group in an effort to streamline and consolidate duplicative and overlapping classes. The focus is on developing fewer, broader classes.

## **STUDY PROCESS**

The following is a general guide of the typical elements and considerations of a system maintenance study. Depending on the scope and nature of a study, steps may be added or removed at the discretion of the compensation specialist leading the study.

### **Identify, Explore and Document Issues**

Information is gathered by conducting literature review and research, including occupational literature, class and series history, current use of classes in the position allocation process, employee and manager communication (phone, written, or meetings), any past appeal records, and market data. Issues may be discussed and clarified with managers, human resource professionals, employee organizations, or other interested parties.

Part of the research is to answer the following questions.

- What is the organizational distribution of the class or series?
- Are all departments using the classes having similar problems or issues?
- What is the history of the class or series? How long has it been since it was last studied?
- Are all classes (levels) in the series being used? If not, why?
- Are there annual compensation survey matches for the classes? What does the survey data show and for how long (trend)?
- What is the pay relationship between the classes and other classes in the series? Do similar problems or issues exist in similar or related classes?
- Is a system maintenance study likely to solve the issues or problems? Are there other options for addressing the issues if a study is not appropriate, feasible, or necessary?

Information is documented, typically for a narrative report, and includes contacts, issues identified, and actions taken to address the issues. Documentation is important because it provides a history of the problems or issues with classes and the compensation specialist's considerations and efforts in addressing those issues, especially in those situations where a study is not conducted.

### **Scheduling Studies**

Studies are typically scheduled on an annual, fiscal-year basis. They are timed to allow pay grade changes to be included in the August 1 annual compensation survey report. Due to statutory requirements, studies involving changes to pay structure and grades have a July 1 implementation date. Studies are identified and prioritized based on a variety of factors, including the criticality of the problems experienced with current classes, number of classes involved, number of departments affected, and staff resources available.

Once the study schedule is established for the upcoming year, it is normally published in several ways: email to all human resource administrators and employee organizations, articles in the *Advisor* (a newsletter for state human resources professionals), and on the division's Web site at

[www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr). The announcement of studies usually includes the scope and purpose of each study and a tentative schedule for its completion.

### **Study Initiation**

Depending on the scope and purpose, the study may be conducted by one or more division compensation specialists who may lead a study team. If a team approach is used, the competencies sought in team members are identified and HR professionals with appropriate certification are invited to participate. Study teams may include a broad sample of human resource professionals from various disciplines, such as selection (e.g., minimum qualifications, EEO codes). If appropriate, representatives from both higher education and non-higher education departments are sought. Managers and employees in the occupation being studied may be invited to present information as subject matter experts during the course of the study.

Division compensation specialists select study team members. The study team leader (compensation specialist) then discusses the following with the study team:

- team member roles and requirements;
- purpose and goals of the study;
- the process (including any job description collection or rating processes);
- major issues;
- major tasks and timelines;
- compatibility with the annual compensation report cycle and deadlines;
- confidentiality;
- the parameters for the inclusion and role of department representatives and subject matter experts;
- the development of ongoing communication and information distribution lists and mechanisms;
- the need for any special direct compensation surveys; and,
- implementation plans.

The compensation specialist, in consultation with the study team, determines if reviewing and rating job descriptions (PDQ's) will be part of the study, and if so, whether job descriptions for all jobs in the series will need to be rated or if rating a sample will be sufficient. The decision is based on the specific purpose or scope of the study. If only a sample is to be evaluated, the position or organizational distribution of the classes or series is analyzed to assure the sample is representative. Departments are then contacted and official job descriptions, organization charts, and other data are requested for the study. The request should include clear expectations of the standards for quality control, the scope of the study, the purpose of the study team, how the panel evaluation process will be used, the role of department representatives in any panel and rating processes, whether class placement will occur, and the timeframe for submitting requested information.

Depending on the nature of the study, collecting and rating job descriptions is not always necessary. For example, job descriptions are not needed when the issues for study are focused on pay grade and relationships and there are no issues with class concepts, levels, factors, or use of the series. On the other hand, if the issue is a request for an additional level within a series, collecting and rating job

descriptions would be necessary to determine if the need for an additional level exists and, if so, what factor levels describe it.

If job descriptions are part of a study, the specialist establishes the rating panel, the schedule, and conducts the panel meetings. If additional information is required, site visits or interviews with subject matter experts may be conducted to collect additional information.

### **Analysis and Considerations**

Once all of the data have been collected, the analysis begins. The following lists some of the points that are addressed.

- Confirm appropriateness of the occupational group.
- Analyze the relationship of the class or series with other series considering potential overlap, possibility of consolidation, need for expansion, etc.
- Determine the need to expand, narrow, change, or redefine concepts.
- Identify and define benchmark levels (e.g., full operating and supervisory); examine factor thresholds based on the latest ratings of job descriptions or on similar levels or classes in the same group.
- Consider appropriateness and implications of an intern level.
- Review and establish number of levels.
- Review entry into the series and top-end exit from the series.
- Review span of control issues (e.g., level and minimum number of subordinates needed for work leaders and supervisors).
- Assess need for and implications of specialty areas.
- Analyze compensation data, including verification of annual compensation survey benchmark matches and use of pay differentials.
- Evaluate the need for conducting a direct compensation survey.
- Consider the pay grade and pay relationship of each class and the current level of compensation in the market.

### **Salary and Pay Grades**

Data from the annual compensation survey is frequently used to set pay grades. If the class is matched directly to the market in the annual compensation survey, that salary data is applied. If the data shows the pay requires adjustment, then the survey match is verified along with data from previous years to establish a trend. If data through the annual compensation survey is unavailable or not sufficient (e.g., class is unmatched, minimal number of firms reporting, the salary variance fluctuates over several years), a direct survey may be conducted by the division. If a direct survey is conducted, a survey form and capsule descriptions are developed and sent to selected employers. When a direct survey is conducted, the compensation specialist may arrange for discussions similar to “meet and confer” beforehand to provide an opportunity for input from employees, managers, and employee organizations. In some cases, internal relationships are used to set salaries for classes with insufficient data.

Published third-party surveys used for the annual compensation survey are typically copyrighted in addition to being confidential under the statute for the annual compensation survey process. Copyright still applies when such data is used in a study. Data in direct surveys conducted by the division is collected under the industry standard of confidentiality. Only aggregate or summary quantitative data is ever reported by the division.

- If a published survey is confidential and copyrighted, limited survey information (e.g., aggregate data, list of participants separate from data) may be viewed by appointment (no copies) and in the presence of a DHR staff member. Benchmark or capsule descriptions may be shared with advance written permission from the publisher.
- If a published survey source is not confidential, but copyrighted (and not part of annual survey data), viewing aggregate quantitative results by appointment is possible, but no copies will be provided or allowed.
- As a matter of common and accepted survey practice, confidentiality is guaranteed to all participants (public or private) in direct surveys conducted by division compensation professionals in return for participation, so only aggregate data will be reported (not specific salary data with individual source identified).

### **Communication**

Progress reports and working notes may be sent (email or fax) during a major study to human resource administrators. Periodic information may appear in the *Advisor* and on the division's Web site [www.colorado.gov/dpa/dhr](http://www.colorado.gov/dpa/dhr), and be shared through meetings with the human resources community and other interested parties. Human resources administrators are responsible for internal communications with interested parties in their respective departments.

The study work plan should establish an ongoing method to provide updates and give individuals opportunities to provide input as the study progresses. Managers, human resource professionals, supervisors, employees, and other subject matter experts may be involved throughout the study process. Communications time is built into the study work plan along with a process to regularly update stakeholders.

### **Published Documents**

Several documents are published at various times during a system maintenance study. These include the narrative report, class descriptions for each series, and a chart showing class conversion. For those studies involving class placement, there is also a chart showing each position and its individual class placement. Publishing a study involves several stages.

- The *draft stage* presents overall class structure and broad class concepts for the purpose of soliciting comments and input from interested parties before assigning proposed grades. Draft class descriptions may or may not be prepared depending on the specific study. A draft stage is not required.
- The *proposed stage* presents the recommended changes in an official Job Evaluation Letter (JEL). This stage includes a narrative report explaining the study process, any proposed class

descriptions, any changes to pay grade, conversion charts or any class placement results. This stage includes the “meet and confer” process.

- The *final stage*, also presented in an official JEL, implements the changes on a specified effective date and includes the final narrative report with any class placements, and the official class descriptions.

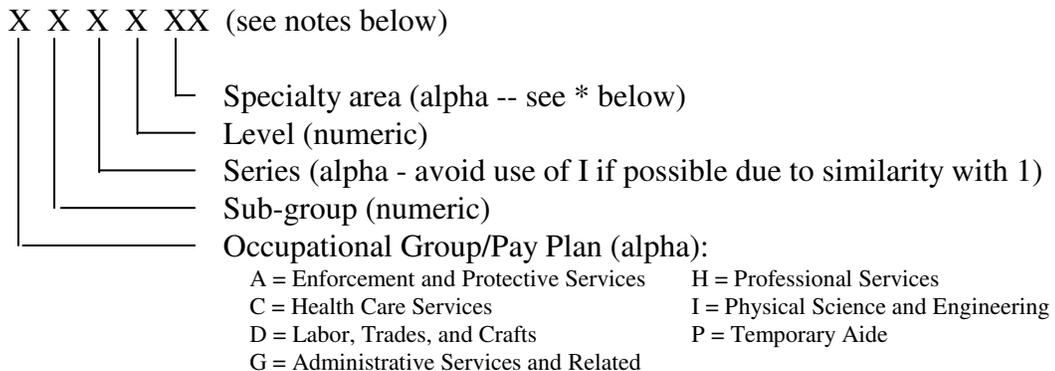
Class descriptions are written according to a standard format that includes the class title, class code, a general description of the occupational work of the series, a description of the concept of each class within the series, the appropriate levels for the job evaluation factors for each class in the series, any necessary definitions, a standard statement for minimum entrance requirements, the class series history, and a summary chart of factor ratings for all classes in the series. In some cases, examples of work may appear in the description of the concept or factors for a class. However, these are for illustrative purposes only and are not used as a basis for allocation of positions.

Narrative reports are written to provide a historical record of a study. They outline the study methodology, highlight essential changes, support the recommendations for the class or series and pay relationships and grades, outline the issues and rationale regarding why certain decisions were made, document “meet and confer” activity (in the final report), and document fiscal impact. A class placement chart, showing how positions will be moved from current to new classes, must also be included with the narrative when class placement occurs.

### Class Codes

Class codes are established using the “class coding” guidelines. Class codes are six characters long. Each separate class or level in a series must have a unique code (e.g., three levels need three titles and codes).

Characters within the codes mean the following:



\* The fifth character of the class code defines the type of class and uses only the following.

\* - for those with specialty areas that are not trainees or interns.

X - for those without specialty areas and that are not trainees or interns.

I - for those that are Trainee or Intern (used in class title).

T - for target class -- first level in series above the intern or trainee. Typically, every series has a target class, whether there is an intern in the series or not, except for management, supervisory, or other classes where interns or trainees do not normally move into them.

The sixth character defines the specialty areas and uses an alpha character for those classes with specialty areas and an X for those classes without specialty areas. The names of the specialty areas are found on the class description after the series title. They begin with A, go through Z, and DO NOT use X. For example, I3B3\*B is the code for a Physical Science Researcher/Scientist II, chemistry specialty area.

### **Proposed Publication**

Once the proposed publication package is prepared, the documents are routed *internally* within the Division of Human Resources to the section manager for approval to release externally. The publication of a Job Evaluation Letter (JEL) is the official notification of proposed changes. Human resource administrators, in their capacity of acting on behalf of the department's appointing authority, receive an email notice of the proposed JEL, with a Web link to study materials, and are responsible for notifying and providing information to affected employees within their departments. All other appointing authorities in a department are also responsible for providing this information to affected employees. Employee organizations receive the information the same time it is provided to the departments. In addition, notice of proposed changes typically appear on the division's Web site, with the exception of special use classes or minor proposed changes (e.g., title and code changes, adjustments to factors). Departments should use any appropriate and reasonable means of communication available to ensure timely, accurate, and effective notifications (e.g., print, email, direct mailings, department newsletters, personal letters to individual employees), particularly if the study will result in a potential change of pay grades.

In order to meet budgeting requirements and statutorily mandated effective date for system maintenance studies involving increased costs, the effective date for studies is July 1. Most studies must be completed in early May to allow ample time for "meet and confer" sessions and final publication processes to be completed by June 1. Proposed changes that result in increased costs or potential savings may be delayed a year until the next July 1 so they can be reported in the annual compensation survey report.

### **Meet and Confer**

C.R.S. 24-50-104(1)(b) requires the state personnel director to "meet and confer" in good faith with affected employees and employee organizations, when requested, before the proposed results of a study are finalized and implemented. Affected employees are those in the class for which changes are proposed.

Both official notice and "meet and confer" occur at the end of a study when results are proposed. For example, a large study with major changes may have several public meetings scheduled in different regions of the state for affected employees and employee organizations to attend.

All "meet and confer" activities need to be concluded within a reasonable time frame before release of the final results. The proposed JEL and any other notices that may be issued will include a date by which such activity must conclude. While the division initiates the public meeting(s), an individual may request a meeting by the deadline published in the proposed JEL. For example, if implementation is scheduled for July 1, activity (scheduled public meetings and any individual requests for meetings) may need to be concluded by May 1 in order to finalize changes and prepare

for implementation. The division generally tries to allow up to 30 calendar days, beginning with the date the notice is published, for “meet and confer” activity on major studies.

Once the deadline for comment on draft and proposed documents has passed, the comments and objections expressed are addressed and decided. To the extent possible, answers to issues raised during the comment period are incorporated in the final study narrative report.

### **Costing Studies**

C.R.S. 24-50-104(4)(c) and (6)(a) require that any study involving increased costs be included in the annual compensation survey report for an effective date on the ensuing July 1. The following information depicts the assumptions made in the calculation of increased costs.

- Data is taken from an employee database as of a specific date and is assumed to be accurate as of that date.
- Only permanent positions are reported. Vacant, temporary, and substitute positions are excluded.
- Studies with increased cost are implemented on July 1 unless special authorization is obtained in accordance with statute.
- The implementation date of July 1 coincides with the presumed implementation of the annual compensation adjustments. In accordance with the Director’s rules regarding the order of multiple actions on the same effective date, system maintenance studies are implemented first. For this reason, these calculations do not include any annual compensation adjustments.
- In accordance with the Director’s rules, system maintenance studies are implemented on a “dollar-for-dollar” basis, which means an employee’s current salary remains unchanged when a class is moved to the new grade. An exception is when a class moves upward and the employee’s current salary falls below the minimum of the new grade. Salaries will be adjusted to the new minimum and such adjustments to base salary represent the reported increased cost.
- Costs are rounded to the nearest dollar. Employer contributions to retirement and Medicare costs are included in the calculations.
- C.R.S. 24-50-104(4)(b) states that the annual compensation survey report shall reflect all adjustments necessary to maintain the salary structure for the next fiscal year. As stated above, an employee’s current salary remains unchanged when a class is moved to a new, higher or lower grade. If some employees’ salaries are above the maximum of the new lower pay grade, those employees maintain their current salary for up to three years as authorized by C.R.S. 24-50-104(1)(e). Indeterminate “cost avoidance” may result from any employees who are ineligible for base-building achievement pay awards after the study is implemented,

those who may remain above the maximum after the three-year saved pay period, or vacancies that may be filled at the lower minimum. Any adjustment in pay grades will be included in the annual compensation survey report.

### **Conversion or Class Placement**

The conversion and class placement processes complete the transition from old to new classes and the placement of individual positions in the new classes. The primary purpose of conversion and placement is to preserve the retention rights of employees who may be laid off in the future. A secondary purpose of conversion is administrative ease in implementing studies. Depending on the purpose of studies and given the assumption that positions are properly allocated, it is not always necessary to review individual positions.

A system maintenance study may use either of two types of conversion: class conversion and class placement. The differences are explained below. Common characteristics of both types include dollar-for-dollar salary adjustments, the absence of examinations (because conversion or placement is not a promotion), the absence of retention rights (because conversion or placement is not a demotion), and the absence of appeal rights.

Class *conversions* are mass movements of all positions in an existing class to a new class. They are done primarily for retention and reinstatement purposes, without regard for the alignment of actual positions to the new concept. Class conversion is simply the transfer of existing classes into new classes. It includes the automatic, mass movement of all affected positions. In a class conversion, individual positions are not reviewed to determine the appropriateness of the new class.

On the other hand, class *placement* is the movement of a position from an existing class to a different class. It is done primarily to realign positions within the new class structure. The concept of realigning individual positions as the logical conclusion of a study is an accepted practice in the field of job evaluation. Because class placement is realignment due to a change in the description of an occupation, and not an individual adjustment to an assignment, all positions in the class or series are aligned under the system maintenance study. Class placement is not an individual allocation. It is part of a system maintenance study and subject to its provisions (e.g., one effective date for the entire study, dollar-for-dollar, no promotional examinations, no retention or appeal rights).

For example, if a study is focused on the salary of a class or series, conversion through placement would be unnecessary and class conversion would be more appropriate. Class placement should occur in studies where substantial changes in concept result in a different structure of classes and positions need to be realigned. The compensation specialist determines the type of conversion to be used based on what is best for the system's integrity and affected departments. The decision will be based on the facts unique to the particular study and explained in the narrative report.

### **Final Publication and Implementation**

The Director of the Division of Human Resources approves a final publication before release for implementation. Final publication includes the JEL conversion chart, narrative report, and class descriptions. If class placement is part of the study, a roster of class placements is published as part

of the final narrative and departments are responsible for delivering an individual notice to each impacted employee,. A class cannot be used until it is implemented. Once all of the placements and conversions are completed, the former classes are abolished.

The official notice is distributed by broadcast email to human resource administrators and employee organizations, and is placed on the Web site. The JEL letter that is emailed contains the Web site address where the reports, charts, and class descriptions are available.

## **RECORDS OF STUDIES**

The following lists the minimum documentation that should be kept in system maintenance study files. Files are kept in class code order by class series. This information supplies a history of issues affecting classes and the changes made over time. This information can also be used to supplement legal records as needed. Information on classes that no longer exist is kept in electronic format.

- Announcement of the study and solicitation of study team members.
- Letters of interest from potential study team members.
- Correspondence identifying issues and concerns with classes.
- Any working notes taken on contacts with human resources administrators, employees, supervisors, managers and employee organizations, and study team meetings.
- Articles published in newsletters and on the Internet.
- Salary data provided by compensation specialists and resources used.
- Survey instrument and records from any public meeting similar to formal “meet and confer” for any direct survey conducted.
- Explanation of how data was used that supports conclusions drawn from it in the proposed narrative.
- Narrative reports.
- Information gathered during the draft stage if used.
- Proposed and final JEL with notices and signature pages.
- Class placement rosters if applicable.
- Notes from “meet and confer” meetings and sign-in sheets to support information in final narrative report.
- Written comments from proposed publication.
- Costing information and employee data used to calculate costs documented in the narrative report.
- Final class descriptions.

## **GLOSSARY OF TERMS**

**Job Evaluation Factors.** These are the factors contained in class descriptions that are used to evaluate positions for assignment of a job to the proper class. The four factors applied to all jobs in the state personnel system are Decision Making, Complexity, Purpose of Contact, and Line/Staff Authority.

**Meet and Confer.** This is a formal process required by a statutory change in 1998. “Meet and confer” must occur before study results are finalized and implemented. Although not required for a direct survey conducted as part of a study, if a process similar to “meet and confer” is conducted, it will occur before the survey is conducted.

Every attempt is made to keep this information updated. For additional information, refer to the *State Personnel Board Rules and Director’s Administrative Procedures* (rules) or contact your department human resources office. Subsequent revisions to rule or law could cause conflicts in this information. In such a situation, the law and rule are the official source upon which to base a ruling or interpretation. This document is a guide, not a contract or legal advice.

**TECHNICAL ASSISTANCE  
DHR APPROVAL FOR PUBLICATION**

This signature page is required for new technical assistance or when major policy revisions are made resulting from changes in law, rule, directives, or official interpretation. As of March 1, 2009, new signatures are not required for non-substantive revisions resulting from correction of errors (e.g., typographical or grammatical), or updating factual information (e.g., minimum wage, statute or rule cites) or illustrative samples. Readers should always check the date on the first page to ensure they are using the most current version.

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