

OFFICE OF THE GOVERNOR
BUDGET AND PROGRAM PLANNING
STATE OF MONTANA



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Representative Bill Mercer, Chairman
Members of Section D Appropriations Subcommittee

The attached document outlines the process that the Department of Administration – State Human Resources Division goes through for the market analysis used as a benchmark for state salaries each biennium. In addition, the data is used for setting salaries for positions that are vacant when the snapshot for development of the Executive Budget is taken.

Also attached is a copy of the state statute related to the market analysis.

I understand you also had a specific question related to the market analysis for lawyers. For lawyers in the market analysis, the department gathers all fifteen data points for Montana and the four surrounding states (Idaho, North Dakota, South Dakota, and Wyoming) from the three survey sources listed in the process document. The salary survey does not differentiate salary survey data based on unique fields of law or other items that make one lawyer different from another. Instead, the salary survey focuses on commonalities within an occupation. The broadband system allows pay to be adjusted within an agency's ability to pay for the factors provided by 2-18-301, MCA, "...competency, competitiveness to the external labor market, pay progression, and other nondiscriminatory factors, while considering pay relationships within an agency or pay unit."

If you have additional questions, please let me know.

Sincerely,

A handwritten signature in cursive script, appearing to read "Amy Sassano".

Amy Sassano
Deputy Budget Director

The 2022 Market Analysis Process

Contents

Introduction.....	1
Broadband Market Analysis	1
Tier 1 – Examples.....	2
Anchoring Occupational Wage Ranges	2
Salary Sources	2
Two-Tiered Market Method.....	3
Market Midpoint	4
Aging.....	4
Extending Occupational Wage Ranges.....	5
Occupational Wage Ranges.....	5
Range Spread.....	5
Supervisor and Apprentice Occupations.....	6

Introduction

Each biennium, State Human Resources (State HR) collects and analyzes salary survey data, as required by 2-18-301 (1) and (6), MCA. The 2022 market methodology is described below.

Broadband Market Analysis

- State Human Resources gathers salary-survey data from three salary-survey sources to calculate the midpoints for occupational wage ranges. The final survey data is posted in the 2022 Market Analysis 025 spreadsheet.
- The broadband methodology established by the State Pay Task Force allows two tiers of survey data to calculate occupational wage ranges. Most occupational wage ranges only use tier one salary-survey data. Tier two salary-survey data may be provided for occupations with insufficient salary survey points or occupations experiencing recruitment or retention competition from employers outside of our region. Only one occupation this year required tier-two analysis. State HR works with agencies to gather additional salary-survey data for tier 2 occupations. Tier-two surveys are based on:
 - recruitment reports from SOMRS (the state's recruitment system),
 - turnover reports from SABHRS (the state's employee database), and
 - compensation best practices.

**The 2022 market-analysis process is intended for budget-planning purposes for the biennium 2023-2025 (beginning July 1, 2023) and should not be construed as a contract or promise of pay.*

July 1, 2022

More information about the two-tiered process is provided later in this document.

Tier 1 – Examples

To describe the process for determining each occupational wage range, we'll use an example for the "Accountant" occupation. The following table reflects the broadband 025 rates for Accountant:

Job Code	Job Code Title	Anchor Band	Minimum	Midpoint	Maximum
B21011	Accountant 1	5	38453	48067	57680
B21012	Accountant 2	5	49207	61508	73810
B21013	Accountant 3	5	61508	76886	92263

Anchoring Occupational Wage Ranges

The first step of the market process is to determine the "anchor" for each occupation. The market midpoint for an occupation is attached to a specific pay band or "anchor level."

Classification analysts at State Human Resources review the purpose of the occupational standard to determine the journey level of the work. The journey level of the work is generally considered the mid-level of the work series.

- For occupations with only one level, the anchor level occurs at level one.
- For occupations with three levels, the journey level occurs at the middle level of the standard.
- For occupations with two levels:
 - if the occupation usually doesn't require on-the-job training, the anchor usually occurs at level one.
 - If the occupation usually requires on-the-job training, the anchor usually occurs at level two.

We check the journey level for the occupation by evaluating the education level in the O*Net standard. Information from the federal Bureau of Labor Statistics indicates that the job zone rating for the "Accountant" occupational category is Job Zone Four. This job zone most closely matches the education and experience requirements of the occupational standard at level two, confirming the accuracy of the anchor level.

Salary Sources

After determining the anchor point for each occupation, we gather and analyze information from the same three salary survey sources used during the previous 2020 market analysis. Using three sources ensures more occupational matches, includes standard industry competitors, provides statistical reliability, and helps us achieve an adequate sample size. We used the median data point from the following survey sources:

- Occupational Employment Wage Statistics (OEWS)
- Salary.com's CompAnalyst
- National Compensation Association of State Governments (NCASG)

The **Occupational Employment Statistics (OES)** program, conducted by the Bureau of Labor Statistics, U.S. Dept. of Labor, produces employment and wage estimates for over 700 occupations. These estimates are available for the nation, for individual states, for specific industries, and for some selected metropolitan areas. The OES survey has the largest number of responding private and public sector employers of all of our salary survey sources. The survey also matches the largest number of state government jobs. This program undergoes extensive data validation testing and is generally considered very reliable. The federal government classifies these OES occupations using the SOC/O*Net classification system. State of Montana occupations use O*Net descriptions as classification standards, which creates a high level of confidence with correct job matching. Most OES data used by Montana state government is available on the OES web site at: <http://www.onetonline.org/>.

Salary.com's CompAnalyst centralizes third-party surveys in an online database that allows us to search over 4,200 benchmark jobs and job descriptions by job family or job level. The tool uses many of the largest proprietary surveys available for a variety of company sizes. Data from CompAnalyst is updated monthly. For more information about CompAnalyst, go to <https://www.companalyst.com/about-us/>.

The **National Compensation Association of State Governments (NCASG)** survey represents compensation data from 37 state governments who exchange salary information annually. Other state government occupations and salaries are considered reliable job matches for our market comparisons. Our 2022 market analysis process uses NCASG state government data from Idaho, Montana, North Dakota, South Dakota, and Wyoming.

While NCASG matches are considered very reliable matches, this salary-survey source produces fewer matches than the other two survey sources. The NCASG survey benchmarks are predominantly journey-level professional positions. NCASG does not typically survey lower-level occupations or middle-management occupations. The reason lower-level jobs are not surveyed is because most state governments normally do not recruit outside their state for those occupations. Middle-management jobs are difficult to survey because agencies are organized differently in each state.

Two-Tiered Market Method

For most of our occupations, we consider salary information from Montana and the surrounding states of Idaho, North Dakota, South Dakota, and Wyoming. These states were identified as the relevant labor market because of their proximity, comparable demographics, and primarily rural economies.

For some occupations, we need to recruit from a different market area. State HR uses HR metrics and agency feedback to identify and recommend tier 2 occupations. We based our tier 2 recommendations on:

- recruitment reports from SOMRS (the state's recruitment system),
- turnover reports from SABHRS (the state's employee database), and
- compensation best practices.

Our two-tiered survey approach to determine occupational wage ranges follows.

- **Tier 1 (standard market analysis):** We use the median rate of the average for data found in the three salary survey sources in Montana's regional labor market (Montana, North Dakota, South Dakota, Wyoming, and Idaho) to calculate the market midpoint.
- **Tier 2 (customized market analysis):** With the consensus of employing state agencies, we customize our survey approach for difficult-to-fill occupations or occupations with insufficient data points. To qualify for a customized analysis, the occupation must have:
 - fewer than five survey data points (Tier 2 process required); **or**
 - demonstrated recruitment and retention statistics greater than the state average indicating issues due to pay reasons, agencies using the occupation set pay at equal to or greater than the current market ranges, **and** insufficient market-range movement exists in the new markets. State HR defines insufficient market-range movement as an occupation's new midpoint at the anchor level:
 - has decreased;
 - hasn't changed;
 - has increased less than 1 percent.

Tier 2 requests may not be based on an individual's salary or a specific job announcement. Instead, tier 2 analysis uses an expanded survey approach that includes additional salary-survey data points from relevant competitors. Expanded data points may include other states' salary data, industry-specific data, or other salary-survey data approved by State HR. An agency may contact State HR at any time to request a tier 2 analysis. However, only those tier 2 occupational wage ranges completed before the statutory deadline are considered for biennial budget planning.

State HR reserves the right to decline a tier 2 request if criteria for a tier 2 market is not met. Declining a tier 2 request does not prevent an agency from adjusting its pay ranges to recruit or retain employees, according to the agency's broadband pay rules.

Market Midpoint

To calculate the occupational wage range, we determine the median of our 15 possible data points and set this rate as our anchor. Medians are considered more statistically valid than averages when considering more data points. The following table shows all median data from our salary survey sources for our accountant example from the four surrounding states and Montana:

Job Code Title	NCASG IL	NCASG MI	NCASG NY	NCASG SD	NCASG WY	OEWS	OEWS IL	OEWS MI	OEWS NY	OEWS SD	OEWS WY	SCOM	SCOM MI	SCOM NY	SCOM SD	SCOM WY
Accountant 1	48958	55504	58799	53750	49799	74837	71074	68482	71706	71032	61313	60302	62079	57566	59094	

Aging

Not all of the survey sources cover the same time period. We bring all of the sources to the same time frame by aging data using the employment cost index (ECI) provided by the U.S. Department of Labor. In addition, we also account for increases to the ECI in our final market data by multiplying our median by the ECI from the current market year if there are significant increases during the first quarter of the market year.

Extending Occupational Wage Ranges

We calculate the slope for the midpoints of the band levels above or below the anchor level by extending the rates using a variable slope. The method for extending the wage range to other levels is the same, except for supervisory and apprentice levels (see occupational wage ranges).

Occupational wage ranges for levels at a lower pay band are set using a slope based on the Montana OES percent difference between the 25th and 50th percentile. Occupational wage ranges for the same occupation classified at a higher pay band are set using a slope based on the Montana OES percent difference between the 50th and 75th percentile. For occupations with two or more levels above or below the anchor and slopes greater than 25 percent, we capped the slope for each level at 25 percent.

In our Accountant example, the occupational wage range is \$61,508 for the midpoint. We then use a 78.15 percent (the percent difference between the 25th and 50th percentiles in the OES data) slope to extend the occupational wage range to the level below the anchor and a 128.16 percent (the percent difference between the 50th and 75th percentile in the OES data) slope to extend the occupational wage range to the level above the anchor.

Occupational Wage Ranges

Occupational wage ranges are calculated based on band level. The band assignment for a job code is determined by the midpoint of the occupational wage range for a job code.

Range Spread

The width of the range, sometimes referred to as “range spread,” is the distance from the lowest to highest salary in the range. A range provides flexibility for different levels of competencies, experience, working conditions, and other pay factors. Best practice shows that the work for increasingly higher band levels requires a progressively higher learning curve. In other words, it takes less time to become fully competent for an employee in a lower band level than in a higher band level.

Range spread is established based on the midpoint of the anchor level of the occupational series. Subtracting the lowest salary from the highest salary and dividing the result by the lowest salary calculates the percentage of the range width. The following is the range spread for each occupational wage range in the nine pay bands:

Band	Band Spread	Spread on Either Side of Midpoint
01	30%	13.0%
02	40%	16.7%
03	40%	16.7%
04	40%	16.7%
05	50%	20.0%
06	50%	20.0%
07	55%	21.9%
08	60%	23.1%
09	60%	23.1%

Using this process, the occupational wage ranges for Accountants are:

Job Code	Job Code Title	Anchor Band	Minimum	Midpoint	Maximum
B21011	Accountant 1	5	38453	48067	57680
B21012	Accountant 2	5	49207	61508	73810
B21013	Accountant 3	5	61508	76886	92263

Bands in Broadband 025 are assigned by looking up the job code's midpoint at the anchor level from the table below. The band level then determines the range spread. In our accountant example, the midpoint is \$61,508. Since this amount falls within the band five range, we use the range percentage calculation for band five.

Band	Minimum	Maximum
1	19136	27000
2	27001	36000
3	36001	46000
4	46001	59000
5	59001	71000
6	71001	86000
7	86001	106000
8	106001	160000
9	160001	300000

Supervisor and Apprentice Occupations

Supervisor and apprentice job codes have separate pay ranges.

- Supervisor ranges are calculated using the minimum and maximum of the salary ranges for all regular levels in an occupation and multiplying the resulting range by 10 percent.
- Ranges for apprentice levels are calculated by multiplying the lowest level's pay range by 80 percent.

Montana Code Annotated 2021

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 18. STATE EMPLOYEE CLASSIFICATION, COMPENSATION, AND BENEFITS

Part 3. Compensation Determination

Intent Of Part -- Rules

2-18-301. Intent of part -- rules. (1) It is the intent of the legislature that compensation plans for state employees, excluding those employees excepted under **2-18-103** or **2-18-104**, be based, in part, on an analysis of the labor markets as provided by the department in a biennial salary survey. The salary survey must be submitted to the office of budget and program planning as a part of the information required by **17-7-111**.

(2) Pay adjustments, if any, provided for in **2-18-303** supersede any other plan or systems established through collective bargaining after the adjournment of the legislature.

(3) Total funds required to implement the pay increases, if any, provided for in **2-18-303** for any employee group or bargaining unit may not be increased through collective bargaining over the amount appropriated by the legislature.

(4) When fiscally able, the department shall administer the pay program established by the legislature on the basis of competency, competitiveness to the external labor market, pay progression, and other nondiscriminatory factors, while considering pay relationships within an agency or pay unit.

(5) The broadband pay plan must consist of nine pay bands including occupational wage ranges based on an occupation and its job evaluation factor. Each occupational wage range must contain a salary range with a minimum, a market midpoint, and a maximum salary. The salary for an employee may be less than the minimum salary.

(6) Based on the biennial salary survey, the department shall:

- (a) identify current market midpoints for all occupations; and
- (b) establish the occupational wage range for each occupation.

(7) The department may promulgate rules not inconsistent with the provisions of this part, collective bargaining statutes, or negotiated contracts to carry out the purposes of this part.

(8) Nothing in this part prohibits the board of regents from engaging in negotiations with the collective bargaining units representing the classified staff of the university system.

History: En. 59-922 by Sec. 8, Ch. 563, L. 1977; R.C.M. 1947, 59-922; amd. Sec. 3, Ch. 678, L. 1979; amd. Sec. 3, Ch. 421, L. 1981; amd. Sec. 7, Ch. 710, L. 1983; amd. Sec. 1, Ch. 740, L. 1985; amd. Sec. 2, Ch. 661, L. 1987; amd. Sec. 4, Ch. 660, L. 1989; amd. Sec. 2, Ch. 720, L. 1991; amd. Sec. 9, Ch. 349, L. 1993; amd. Sec. 1, Ch. 640, L. 1993; amd. Sec. 5, Ch. 455, L. 1995; amd. Sec. 11, Ch. 42, L. 1997; amd. Sec. 4, Ch. 417, L. 1997; amd. Sec. 2, Ch. 558, L. 1999; amd. Sec. 1, Ch. 553, L. 2001; amd. Sec. 1, Ch. 552, L. 2003; amd. Sec. 1, Ch. 6, L. 2005; amd. Sec. 10, Ch. 81, L. 2007; amd. Sec. 3, Ch. 7, L. 2009; amd. Sec. 1, Ch. 385, L. 2013; amd. Sec. 5, Ch. 438, L. 2015; amd. Sec. 4, Ch. 430, L. 2017.