Appendices for FY 2015-FY 2016 HR Trends Reports

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Evaluation and Research Unit
Department of County Management
Multnomah County

Appendix A: Description of the Data, Analysis Notes, and Results

Description of the Data

Data for this analysis were pulled out of the county human resource data management system, SAP. Information for all individuals employed by the county any time between July 1, 2014 and June 30, 2016 was included (FY 2015 – FY 2016). Data were pulled in two different reports. The first, the 'snapshot' data, is the employee demographics on the last day of each fiscal year (June 30). This is a snapshot of a specific point in time of our workforce. The second data source, the 'actions' dataset, looks at employee Human Resource (HR) actions that occur over the course of a given fiscal year. This data set includes all the actions that occurred throughout the 2-year period rather than on a particular day; it also includes information on all employees who were at the county at any time during the 2-year period, even if they had no HR actions. More detailed information about the data used in each report is outlined below:

1) Demographics Report – For the analyses that show demographic changes over time (i.e., show data for the years: FY 2013, FY 2014, FY 2015, and FY 2016), the snapshot dataset was used. The FY 2016 snapshot data were also used to determine length of tenure. On the other hand, for demographic patterns which show FY 2016 only (Tabs 5, 6, and 8) we have included all employees at the county at any point during the fiscal year. In this report, we also looked at employee level for non-represented employees. Represented employees were *not* broken down by employee level and are shown as a single group. In order to create the employee level variable, we worked with class compensation to update existing employee level categories that were created in 2014. The full list of employee levels by job classification can be found in Appendix C.

2) Hiring Report – We tested each of the hiring types (regular hires – grouped, temporary hires, regular hires only, temporary to regular hires) to understand the likelihood of hire by department, generation, gender, and ethnicity. The actions dataset was used for these analyses. Additionally, if an individual experienced multiple actions of the same type (e.g., hired as a temporary worker two times during FY 2015 – FY 2016), they were counted as only one instance.

   For the labor pool analysis, Multnomah County Classification and Compensation provided a list of jobs at the county and their respective EEO (Equal Employment Opportunity) categories, as follows:

EEO Code	EEO Group Text
41	Officials and administrators
42	Professionals
43	Technicians
44	Protective service workers
45	Paraprofessionals
46	Administrative support
47	Skilled craft workers
48	Service-maintenance

One category, called "paraprofessionals," was included on this original EEO Code list. However, our federal data comparison for job category does not include paraprofessionals because this category is used only at the local and state level. Therefore, we re-assigned paraprofessionals to groups based on the federal guidance for categorizing jobs (https://www.eeoc.gov/employers/eeo1survey/jobclassguide.cfm) and worked with the Office of Diversity and Equity to confirm these categorizations. The list of job classifications and their EEO code assignment can be found in Appendix D. Among skilled craft workers, there were only 11 regular hires. This group was excluded from the report.

For a comparison to the county, we looked for the most up-to-date federally collected EEO information we could find. The federal EEO data was updated in 2010 (with the census). Since this is 4-6 years prior to the data we are using (2014-2016), we sought alternative sources – contacting the state of Oregon to see if they have more recent data, and the private company, EMSI. The state did not have more recent data and EMSI's data was both expensive and not a match for our needs. Based on this search, we decided to use the EEO data from 2010. The specific dataset was EEO-ALL06R on the census website. This includes the civilian labor force 16 years and older. The federally collected EEO information is based on the current occupation of workers in each county. Therefore, the EEO job category reflects the group of people currently employed in each type of occupation. There may be individuals currently employed in one occupation who are also qualified for a different type of job and there are also people who were unemployed at the time of the census not represented in the data.

The EEO job category information from Multnomah, Washington, Clark, and Clackamas counties provides some idea of the number of individuals employed in the region for each job category, by race/ethnicity and gender. Since Multnomah County is more diverse than surrounding counties and the majority of our applicants live in Multnomah County we decided to weight the EEO job category contribution of each of the four counties. To establish our weights we did a review of 10,000 applications that occurred during our time-period of interest. Of the applicants who came from the four counties identified, 66% came from Multnomah, 10% from Clackamas, 16% from Washington, and 7% from Clark. We weighted the federally collected EEO data to reflect this distribution.

Additionally, to compare hires to the community, we examined the community estimates for gender and race/ethnicity based on the 2011-2015 ACS estimates. (Datasets B03002 & CP05 from Fact Finder). This included the entire community. We also discussed looking at comparisons for communities in poverty since for some services this is a more appropriate comparison. However, the county as a whole has services that affect every member of the community (e.g., tax collection, bridges, elections, health inspections, etc.), so we compared to the whole community.

3) Separations Report – We tested each of the separation types (voluntary – other employment, retirement, other voluntary and involuntary) to understand the likelihood of separation by department, generation, gender, and ethnicity. The actions dataset was used for these analyses. For these analyses, if an individual experienced multiple actions of the same type (e.g., hired as a temporary worker two times during FY 2015 – FY 2016), they were counted as only one instance.

   Retirement eligibility was calculated using age, tenure at the county, police/fire status, and PERS tier. We did not have information regarding years of service earned outside of the county. Therefore, our estimates of retirement eligibility are likely conservative.

4) Other Actions Report – For promotions, demotions, work out of class, reclassification, and lead status we looked at all employees who had at least one instance of the action during FY 2015 – FY 2016 to understand the likelihood of the HR action by department, generation, gender, ethnicity, and employee group. The actions dataset was used for these analyses. Similar to hires and separations, employees with multiple instances were counted only one time. Demotions are such a small group, only descriptive analysis was performed.

Analysis Notes: Hiring, Separations, and Other Actions

The relationship between demographic group and likelihood of an action was tested using **chi-square tests of independence**. The chi-square test of independence tests whether an association exists between two variables by comparing the observed frequencies in a category (e.g. experienced the action or did not experience the action) with the frequency of cases in that category that would be expected if there were no association between the variables. To determine which groups were significantly different than countywide results we evaluated the significance level and the effect size of the overall chi-square test, as well as the standard residual, as follows:

- **Significance level:** Significance was tested at the 95% confidence level (p <.05). Highlighted red in the tables below.
- **Effect size:** The measure of effect size we used for these analyses was Cramer's V. The Cramer's V effect-size statistic indicates the magnitude (i.e., size) of the relationship between two variables (in this case, between HR action and demographic variables). We used Cohen's (1988) criteria for interpreting the strength of Cramer's V.
- **Standard residual:** After we determined that a chi-square test was statistically significant and had at least a small effect size, we determined which groups were significantly different than countywide results by evaluating the standard residual for each group. A standard residual greater than +1.96 or less than -1.96 indicated that that group's likelihood of experiencing the action is significantly different than the countywide likelihood. A standardized residual greater than +1.96 indicated significantly greater likelihood for that group; a standardized residual less than -1.96, indicated significantly lower likelihood for that group. Only results with a standard residual above 1.96 or below -1.96 are shown in the tables below as either "above expected" likelihood or "below expected" likelihood.
- **Note about sample size of demographic groups:** We conducted chi-square analyses including all demographic groups, even if a group had a small sample size, because chi-square analyses are relatively robust against small sample size.

We examined the following actions using the chi square approach (results are shown on the following tables):

1. Hiring actions (likelihood of experiencing any regular hire: regular hire or temp to regular hire (combined), temporary hire, regular hire alone, and temp to regular hire alone)
2. Separation actions (likelihood of experiencing any voluntary separation: all voluntary combined, an involuntary separation, a separation due to other employment, a separation due to retirement, and a separation due to any voluntary reason other than other employment or retirement)
3. Other actions (likelihood of experiencing a promotion, work out of class, lead status, and reclassification)
   - Work out of class (WOC) was examined in two ways: First (WOC - NonTimeSheet), is the longer-term WOC opportunities that are actions in SAP. The second (WOC - ALL) include the SAP WOC data as well as the WOC experiences reported on individual time sheets that are generally a much shorter duration WOC compared to those in SAP.

Logistic regression was also performed to assess the impact of a number of factors on the likelihood that a person would experience a particular HR action (e.g., hired/not hired). We relied primarily on the chi square results to assess statistically significant findings, using logistic regression finding as a comparison to assess consistency. For this reason, full regression results are not included here. HR actions were compiled into "dummy" variables with a value of one if a person experienced the outcome (hired) and a value of zero if the person did not experience that outcome (not hired). People with more than one instance of an outcome (for example, someone who worked out of class more than once during the period) were also given a value of one, so each outcome is defined as "at least one instance" of the outcome. For example, the logistic regression for regular hires looks at the likelihood of having at least one regular hire over the time-period. Most people had only one instance of each outcome. The full model contained four independent categorical variables: race, age, gender, and department.

Reference Categories: Logistic regression requires that you compare each independent variable to one "reference" category. For race the reference category was Caucasians. For age the reference category was Millennials, for gender the reference category was males, and for department the reference was DCHS. As noted, department was included mainly as a controlling variable in these equations, and results for department were based on the ANOVAs shown in Appendix 3 rather than the results here.

Please contact us for the logistic regression results.

Results: Chi Square tests of Independence

Any Regular Hires (Regular and Temp to Regular Hires)	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	MCSO (5.5)	Health (2.5) MCSO (3.0)	Health (3.2) MCSO (5.1)	DCS (-5.8)	DCJ (-2.5)	DCJ (-2.8) DCS (-5.6)	0.000	0.000	0.000	0.334	0.248	0.299
Generation	Gen X (4.2)	Gen X (2.7)	Gen X (4.6)	Baby Boomer (-4.6)	Baby Boomer (-3.3)	Baby Boomer (-5.6)	0.000	0.000	0.000	0.25	0.197	0.235
Gender							0.538	0.079	0.235	0.018	0.051	0.025
Ethnicity							0.378	0.063	0.126	0.059	0.088	0.057

All Temporary Hires	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DCS (4.6)	DCJ (3.1)	DCJ (2.2) DCS (4.9)	MCSO (-5.3)	Health (-2.6) MCSO (-4.2)	Health (-2.4) MCSO (-6.8)	0.000	0.000	0.000	0.324	0.262	0.292
Generation	Baby Boomer (3.6)	Baby Boomer (3.9)	Baby Boomer (5.0)	Gen X (-3.4)	Gen X (-3.3)	Gen X (-4.5)	0.000	0.000	0.000	0.219	0.204	0.207
Gender							0.156	0.336	0.093	0.041	0.028	0.035
Ethnicity							0.286	0.128	0.213	0.064	0.079	0.051

Regular Hire	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	MCSO (6.9)	MCSO (4.8)	MCSO (7.5)	DCJ (-2.0) DCS (-5.2)	DCJ (-2.5)	DCJ (-3.5) DCS (-5.3) Library (-2.3)	0.000	0.000	0.000	0.338	0.235	0.299
Generation	Gen X (4.0)	Gen X (3.0)	Gen X (4.7)	Baby Boomer (-3.5)	Baby Boomer (-3.7)	Baby Boomer (-5.1)	0.000	0.000	0.000	0.195	0.189	0.195
Gender							0.025	0.021	0.003	0.064	0.067	0.064
Ethnicity				Black (-2.0)			0.015	0.352	0.089	0.101	0.062	0.06

Temp to Regular Hires	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	Health (2.9)	Health (3.7)	Health (4.6)	DCS (-2.6) DA (-2.4)	MCSO (-2.6) DA (-2.3)	DCS (-2.3) MCSO (-2.3) DA (-3.3)	0.000	0.000	0.000	0.18	0.17	0.161
Generation				Baby Boomer (-3.2)		Baby Boomer (-2.5)	0.000	0.929	0.012	0.112	0.011	0.063
Gender							0.026	0.344	0.010	0.064	0.028	0.054
Ethnicity	American Indian or Alaska Native (2.1)			Black (-2.0)			0.061	0.055	0.283	0.086	0.09	0.048

All Voluntary Separations	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	Health (2.09)	DCS (3.05) DA (2.82)	DCS (2.37) DA (2.67)	Library (-2.69)		Library (-2.58)	0.002	0.004	0.000	0.071	0.066	0.078
Generation	Baby Boomer (2.56)	Baby Boomer (5.16)	Baby Boomer (5.67)	Gen X (-3.42)	Gen X (-5.34)	Gen X (-6.05)	0.000	0.000	0.000	0.067	0.106	0.12
Gender							0.210	0.046	0.023	0.018	0.027	0.03
Ethnicity			White (2.16)	Asian (-2.73)	Hispanic (-3.48)	Asian (-2.19) Hispanic (-3.11)	0.029	0.001	0.000	0.046	0.057	0.063

All Involuntary Separations	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DCS (5.09) NonD (2.32)	NonD (3.86)	DCS (3.02) NonD (4.2)	Library (-2.01)	MCSO (-2.44)	Library (-2.12) MCSO (-2.86)	0.000	0.001	0.000	0.093	0.074	0.098
Generation	Millennial (1.98)	Millennial (2.3)	Millennial (2.88)				0.090	0.021	0.004	0.031	0.038	0.044
Gender							0.836	0.741	0.719	0.003	0.004	0.005
Ethnicity	Black (3.76)	Black (2.92)	Black (4.09)			Asian (-2.13)	0.001	0.009	0.000	0.061	0.05	0.067

Separation for Other Employment

Separation for Other Employment	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DA (2.89) DCA (2.23)	DCS (2.56) DA (6.04)	DCS (2.46) DA (5.76) DCA (2.08)	MCSO (-2.38)	DCHS (-2.21) Library (-2.3) MCSO (-2.11)	DCHS (-2.1) Library (-2.76) MCSO (-3.3)	0.000	0.000	0.000	0.079	0.108	0.122
Generation	Millennial (5.38)	Millennial (4.7)	Millennial (6.48)	Baby Boomer (-4.09)	Baby Boomer (-3.75)	Baby Boomer (-5.36)	0.000	0.000	0.000	0.096	0.083	0.115
Gender							0.080	0.580	0.099	0.025	0.008	0.022
Ethnicity					Hispanic (-2.3)		0.150	0.056	0.269	0.036	0.041	0.03

Separation for Retirement

Separation for Retirement	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	MCSO (3.09)	Library (2.04)	MCSO (2.1)	Library (-3.06)	Health (-2.52)	Health (-2.01)	0.005	0.086	0.116	0.068	0.053	0.051
Generation	Baby Boomer (10.88)	Baby Boomer (13.51)	Baby Boomer (17.38)	Millennial (-4.56) Gen X (-7.18)	Millennial (-5.47) Gen X (-8.03)	Millennial (-7.26) Gen X (-10.68)	0.000	0.000	0.000	0.196	0.229	0.295
Gender							0.827	0.376	0.447	0.003	0.012	0.01
Ethnicity			White (2.13)	Asian (-2.37) Hispanic (-2.94)	Hispanic (-3.13)	Asian (-2.22) Hispanic (-4.26)	0.001	0.010	0.000	0.059	0.049	0.072

Separation for Other Voluntary Reason	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	Health (2.37) NonD (2.09)	DCS (2.12)	Health (2.48)	MCSO (-2.13)		MCSO (-2.24)	0.024	0.163	0.023	0.062	0.049	0.06
Generation	Millennial (2.63)	Millennial (2.96)	Millennial (3.51)	Baby Boomer (-2.67)		Baby Boomer (-1.97)	0.001	0.003	0.000	0.054	0.047	0.056
Gender							0.825	0.020	0.072	0.003	0.032	0.024
Ethnicity							0.902	0.435	0.674	0.014	0.026	0.02

Promotion	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DCHS (2.59) DCM (3.96)	DCHS (4.82)	DCHS (5.69) DCM (3.59)	Health (-2.58) DCA (-2.05)	Library (-2.7) MCSO (-3.24)	MCSO (-2.82) DCA (-2.38)	0.000	0.000	0.000	0.096	0.097	0.114
Generation	Millennial (5.45)	Millennial (1.98)	Millennial (4.37)	Baby Boomer (-4.53)	Baby Boomer (-3.27)	Baby Boomer (-5.25)	0.000	0.000	0.000	0.102	0.057	0.098
Gender							0.443	0.024	0.037	0.011	0.031	0.028
Ethnicity	Asian (1.97) Am. Indian or Alaska Native (2.65)		Black (2.02)				0.001	0.156	0.004	0.06	0.035	0.052
Emp Grp	Mgmt (4.22)	Mgmt (5.68)	Exec (2.23) Mgmt (7.15)		Rep (-2.22)	Rep (-2.82)	0.000	0.000	0.000	0.067	0.088	0.112

WOC - NonTimesheet

	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DCHS (2.89) DCJ (2.48) DCM (3.1) DA (3.77)	DCJ (5.02) DA (4.22)	DCHS (2.62) DCJ (4.66) DCM (2.4) DA (5.46)	Health (-1.98) Library (-2.34) MCSO (-3.27)	Health (-3.1) MCSO (-3.33) DCA (-1.97)	Health (-3.25) MCSO (-4.57) DCA (-2.06)	0.000	0.000	0.000	0.113	0.119	0.144
Generation	Millennial (3.05) Gen X (2.31)	Millennial (2.06)	Millennial (2.76) Gen X (2.37)	Baby Boomer (-4.59)	Baby Boomer (-2.87)	Baby Boomer (-4.79)	0.000	0.001	0.000	0.085	0.051	0.083
Gender				Male (-2.01)			0.009	0.290	0.045	0.037	0.014	0.027
Ethnicity	Black (3.47)		Black (2.15)				0.005	0.954	0.142	0.054	0.011	0.035
Emp Grp	Exec (2.52) Mgmt (6.02)	Exec (3.09) Mgmt (5.79)	Exec (3.83) Mgmt (8.73)	Rep (-2.62)	Rep (-2.72)	Rep (-3.8)	0.000	0.000	0.000	0.101	0.098	0.142

WOC - ALL

	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DCS (6.05) Library (18.61) DA (2.69)	DCS (6.79) Library (19.57) DA (2.82)	DCS (5.87) Library (15.76) DA (4.12)	DCHS (-3.46) Health (-6.43) DCJ (-2.63) MCSO (-3.43) NonD (-2.77) DCA (-3.84)	DCHS (-3.83) Health (-7.49) MCSO (-3.24) DCA (-4.03)	Health (-7.05) MCSO (-4.45) NonD (-2.41) DCA (-3.96)	0.000	0.000	0.000	0.325	0.331	0.287
Generation	Millennial (6.76)	Millennial (4.94)	Millennial (5.48)	Baby Boomer (-5.34)	Baby Boomer (-3.95)	Baby Boomer (-5.36)	0.000	0.000	0.000	0.127	0.09	0.109
Gender							0.014	0.289	0.070	0.034	0.014	0.024
Ethnicity							0.810	0.643	0.726	0.018	0.022	0.019
Emp Grp			Mgmt (3.49)	Exec (-2.07)			0.076	0.323	0.001	0.032	0.02	0.052

Lead Status

Lead Status	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	DCJ (9.84)	DCJ (9.51)	DCJ (12.76)	MCSO (-3.22) DA (-1.99)	MCSO (-2.66)	DCS (-2.41) MCSO (-4.17)	0.000	0.000	0.000	0.157	0.142	0.195
Generation				Baby Boomer (-2.33)		Baby Boomer (-2.12)	0.008	0.138	0.021	0.044	0.027	0.037
Gender							0.971	0.234	0.381	0.001	0.016	0.012
Ethnicity							0.226	0.842	0.447	0.033	0.016	0.026
Emp Grp				Mgmt (-2.63)	Mgmt (-2.72)	Mgmt (-3.56)	0.009	0.002	0.000	0.043	0.048	0.058

Reclassification

Reclassification	Observations - Above Expected (Standard Residual)			Observations - Below Expected (Standard Residual)			Significance			Cramer's V		
	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year	2015	2016	2 Year
Department	Library (13.18)	Library (6.34)	Library (14.29)	DCJ (-2.63) MCSO (-4.56) DA (-2.26)	MCSO (-4.12) DA (-2.3)	MCSO (-6.24) DA (-3.31)	0.000	0.000	0.000	0.208	0.112	0.226
Generation							0.115	0.114	0.100	0.029	0.028	0.029
Gender						Male (-2.06)	0.047	0.062	0.007	0.028	0.025	0.036
Ethnicity		Am. Indian or Alaska Native (2.39)		Black (-2.02) Hispanic (-2.45)		Hispanic (-1.97)	0.011	0.200	0.039	0.051	0.033	0.043
Emp Grp							0.688	0.626	0.591	0.012	0.013	0.014

Grouping of SAP Reason and Action Codes

We included employees who had any of the following HR actions: hiring, termination, promotion, demotion, work out of class, reclassification, and lead status. In addition, if an individual did not have any of these HR actions in the two-year period, they were also included in the dataset with no actions.

The specific codes used for this analysis are based on the code assignments from the FY 2013 – FY 2014 Workforce Analytics Report. In order to have large enough groups for analysis, individual SAP reason and action codes were grouped together as shown in the charts below. Any notes on a particular action or code are included after the relevant table.

Note on school-based layoffs and rehires

Multnomah County runs a variety of "school-based" programs, primarily within the Health Department and the Department of County Human Services. Some of these programs only operate when public K-12 schools are open, closing over the summer. Many employees in these programs are laid off at the beginning of the summer due to program closure and then re-hired again when the program reopens in the fall. Since these rehires and layoffs are due to a policy surrounding those positions rather than a person-specific decision, they were deleted from the dataset. After deleting school-based layoffs and rehires, there were not enough layoffs or re-hires of regular employees to analyze separately. Layoff and rehire actions other than school-based were grouped as shown in Tables 1 and 2: layoffs were treated as involuntary terminations and rehires of regular employees were grouped with regular hires.

Deleting repetitive Limited Duration Appointments and Work out of class instances

Both limited duration appointments and work out of class/temporary appointments have to be re-entered into SAP if another "action" occurs on a person's file while the appointment is underway. For example, if a person receives a cost of living adjustment (COLA) while working in a limited duration appointment, their SAP file would show two limited duration appointments without an end-action in-between: one before and one after the COLA action. When data was pulled out of SAP both of these actions appeared in our dataset, incorrectly duplicating some limited duration appointments and/or work out of class instances. To correct for this, we deleted any duplicate limited duration appointments or work-out-of-class actions that did not have an end action in between them, unless there was a reasonable explanation in SAP. Many of these duplicate situations arose on July 1st just after the application of a COLA. If a situation was unclear, a decision was made based upon research within SAP. Some people did have multiple discrete instances of working out of class and these were kept in the dataset. Everyday

SAP Action Code	Action Code Text	SAP Reason Code	Reason Text	Sub-Group	Primary Group
1. Hire Groupings			
1	New Hire	1	Vacancy/Replacement	Regular Hire	Regular Hire
1	New Hire	2	Inc. Workforce/New Position		
1	New Hire	3	Rehire et al Not Converted		
1	New Hire	5	Perm. Int Gov Agrmt Transfer		
1	New Hire	8	Direct Appointment		
12	Rehire/Reinstatement/Recall	1	Rehire		
12	Rehire/Reinstatement/Recall	2	Reinstatement		
12	Rehire/Reinstatement/Recall	3	Recall		
12	Rehire/Reinstatement/Recall	8	Direct Appointment		
2	Employee Reassignment	8	Temporary to Regular	Temp to Regular	
2	Employee Reassignment	10	On Call to Regular		
1	New Hire	1	Vacancy/Replacement	Temporary Hire (no sub-group analysis)	
1	New Hire	2	Inc. Workforce/New Position		
1	New Hire	3	Rehire et al Not Converted		
1	New Hire	4	Temp./On Call		
1	New Hire	6	Temp. Int Gov Agrmt Transfer		
1	New Hire	8	Direct Appointment		
1	New Hire	7	Limited Duration Appt.		
12	Rehire/Reinstatement/Recall	1	Rehire		
12	Rehire/Reinstatement/Recall	2	Reinstatement		
12	Rehire/Reinstatement/Recall	3	Recall		
12	Rehire/Reinstatement/Recall	7	Limited Duration Appt.		
12	Rehire/Reinstatement/Recall	8	Direct Appointment		

Note: All school-based rehires were removed from the dataset.

Note: Rehires for permanent employees are grouped as "Hire permanent"

			2. Termination Groupings		
SAP Action Code	Action Code Text	SAP Reason Code	Reason Text	Sub-Group	Primary Group
10	Termination	1	V-Other Employment	Other Employment	Voluntary Separations
10	Termination	3	V-Retirement (reg. or disab)	Retirement	
10	Termination	2	V-Permanent Disability	Other Voluntary Separations	
10	Termination	4	V-Family Demands-Staying Home		
10	Termination	5	V-Insufficient Pay		
10	Termination	6	V-Issues with Manager		
10	Termination	7	V-Issues with Peers		
10	Termination	8	V-Job Abandonment		
10	Termination	9	V-Death		
10	Termination	10	V-Personal Health		
10	Termination	11	V-School		
10	Termination	12	V-Transportation/Commute		
10	Termination	13	V-Working Hours		
10	Termination	14	V-Other Voluntary Resignation		
10	Termination	15	V-Voluntary Layoff		
10	Termination	20	I-Attendance Unacceptable	Involuntary Separations	Involuntary Separations
10	Termination	21	I-Prob Dis/Dischg/Invol Resign		
10	Termination	22	I-End Temp/On-Call/Limitd Dur		
10	Termination	23	I-Failed Background Check		
10	Termination	24	I-Layoff/Position Eliminated		
10	Termination	25	I-Performance Exp. Not Met		
10	Termination	26	I-Policy Violation		
10	Termination	27	I-Other Invol. Termination		
10	Termination	28	I-Look in File - further info.		
10	Termination	29	I-End of Apptmt Elec Off Staff		
10	Termination	30	I-Probationary - Layoff		
2	Employee Reassignment	25	Promotional probation -Layoff		
2	Employee Reassignment	35	Prom Probation -Layoff/FTE Chg		

Note: All school-based layoffs were removed from the dataset.

Note: Although we pulled all the codes for analysis, some codes did not have any employees with the action.

3. Promotion Groupings				
SAP Action Code	Action Code Text	SAP Reason Code	Reason Text	Grouping for Analysis
2	Employee Reassignment	1	Promotion	Promotion
2	Employee Reassignment	2	Promotion within MCCOA or DSA	
2	Employee Reassignment	15	Limited Duration Appt*	
2	Employee Reassignment	27	Promotion/FTE Change	
2	Employee Reassignment	36	Direct Appoint	
ZI	End Work-out-of-class/Temp App	3	End WOC due to Promotion	End work out of class due to promotion
ZI	End Work-out-of-class/Temp App	4	End WOC due to Promo MCCOA/DSA	

Each instance is reviewed to determine if the LDA would be considered a demotion, promotion, or lateral.

4. Demotion Groupings				
SAP Action Code	Action Code Text	SAP Reason Code	Reason Text	Grouping for Analysis
2	Employee Reassignment	5	Demotion Involuntary	Involuntary Demotion
2	Employee Reassignment	12	Fail. to Complete Probtn/Trans	
2	Employee Reassignment	15	Limited Duration Appt*	
2	Employee Reassignment	21	Demotion due to bumping	
2	Employee Reassignment	30	Demotion - Invol / FTE Change	
2	Employee Reassignment	33	Demotion/Bumping/FTE Chg	
2	Employee Reassignment	6	Demotion Voluntary	Voluntary Demotion
2	Employee Reassignment	31	Demotion Vol / FTE Change	

Each instance is reviewed to determine if the LDA would be considered a demotion, promotion, or lateral.

5. Work out of Class/Temporary appointments				
SAP Action Code	**Action Code Text**	**SAP Reason Code**	**Reason Text**	**Grouping for Analysis**
ZH	Work-out-of-class/Temp. Appt.	1	Temp Appt	Work out of Class/temporary appointment
ZH	Work-out-of-class/Temp. Appt.	2	Work Out of Class	

6. Reclassification				
SAP Action Code	**Action Code Text**	**SAP Reason Code**	**Reason Text**	**Grouping for Analysis**
ZK	Reclassification	1	Employee req-upward result	Reclassification
ZK	Reclassification	2	Supervisor req.-upward result	
ZK	Reclassification	3	Employee req.-downward result	
ZK	Reclassification	4	Supervisor req-downward result	
ZK	Reclassification	5	Employee req-lateral result	
ZK	Reclassification	6	Supervisor req.-lateral result	
ZK	Reclassification	10	Other (see maintain text)	
ZK	Reclassification	15	Reclass Denied	

7. Lead Status				
SAP Action Code	**Action Code Text**	**SAP Reason Code**	**Reason Text**	**Grouping for Analysis**
80	Changes in Pay	4	Designated Lead/Premium	Lead
80	Changes in Pay	5	Designated Lead/Prem - Removed	

Appendix B: Equity Considerations in Analysis

The description of equity considerations included here is intended as an overview of the process we used to consider and address equity concerns. There may be additional detail that is not captured in this appendix. The description here is broken down into three phases of the project: planning, analysis, and interpretation.

Project Planning:

We began the project-planning phase of this project with a series of questions specifically designed to highlight issues of equity. These questions included:

1. What is the formal and informal purpose of this project?
2. Who are the stakeholders and what are their perceived viewpoints and priorities?
3. Who might be positively and negatively impacted by this project process or outcome?
4. How are we planning to negate the negative impact?
5. Where do we see power imbalances in this process?
6. How can this evaluation build capacity and power within the county?
7. Who is accountable for 'owning' the results of the report?

Going through these questions highlighted many facets of equity. This included (a) an acknowledgement of who is and is not well represented by our current data, (b) the need for input from impacted communities from the beginning and during the process of interpretation, and (c) the importance of highlighting context and considering power in writing up the results.

> **Representation in Data:** During our review, we quickly identified that our data source (SAP) does not include accurate information for all aspects of identity. For example, disability status, sexual orientation, and expanded gender identity are all underreported in the SAP data (approximately 14% of employees have completed these questions). As a result, we relied more heavily on the data available, specifically, race and ethnicity, gender, and age.

> Additionally, we recognized that the categories available for race and ethnicity as well as gender are not inclusive categories for two reasons. First, the categories captured in SAP at the time we did our study do not reflect a culturally competent approach to racial and ethnic identity. For example, it included the category "Asian or Pacific Islander" which combines at least two very broad groups of people (not to mention the myriad peoples included in each of these groups). Since the time we began our study, "Asian" and "Pacific Islander" have been separated into two groups.

> Second, the very action of grouping diverse peoples into categories is problematic in its own right. This assumes that this group of people has a shared experience, which may not be accurate. However, the groups available were created to reflect the social construction of race in the United States. The Census Bureau states, "The racial categories included in the census questionnaire generally reflect a social definition of race recognized in this country and not an attempt to define race biologically, anthropologically, or genetically" (https://www.census.gov/topics/population/ race/about.html). We

believe that there is value in assessing differences in experience across these groups, despite the shortcomings of the groups themselves.

Input from Impacted Communities: Another aspect that was important to the work was the role of impacted communities throughout the process. At the beginning of the process, we met with some of the stakeholders we identified as central to this work, including Human Resources, Office of Diversity and Equity, Employees of Color Employee Resource Group (ERG) and Managers of Color ERG. We provided each of these groups a list of research questions that we intended to answer during this project. We asked for feedback on these questions and integrated this feedback into the project. For example, the consideration of promotion levels came directly from feedback from the Employee of Color ERC. Some of the feedback could not be addressed using the data sources from this project; this feedback was documented but not included in this project.

Once we completed our initial analyses based on the list of questions compiled from our initial list and the ERG feedback, we went back to the stakeholders. We presented the findings to the stakeholders along with basic descriptions. Stakeholders were asked to review the findings and descriptions in order to provide feedback and highlight ways in which the data resonated with them and did not resonate. This allowed us to make adjustments as needed and identify where findings were not congruent with particular experiences. We included these findings in the report, but highlighted the complexity in understanding them fully.

Context and Power: Another important element that emerged during our initial review as well as during our meetings with stakeholders was the importance of context and power. This included the context of the place (i.e., Oregon), national and local socio-political environment, and the prior experiences of employees with this work. Power is an important element to consider, regardless of the context. We tried to acknowledge this context and power throughout the report.

For example, hiring compared to the community of Multnomah County showed that we were hiring people of color in higher proportions than their proportion of the county. However, stakeholders identified that this finding presented alone fails to acknowledge the historical context of Oregon in which the labor pool exists. Therefore, we present hiring findings along with a note about the historical context of racism and sexism that has helped shape this context. For additional information on this history, please refer to the following resources as a starting point:

1. Looking Back In Order to Move Forward – Oregon's racial, immigration, and educational history provided by the City of Portland (2010). (https://www.portlandoregon.gov/bps/article/412697)
2. Trudy Rice's Story: Nursing and Race in Oregon History – A narrative account of Trudy Rice, one of Oregon's first registered African-American nurses (Hancock 2013). (https://pilotscholars.up.edu/cgi/viewcontent.cgi?article=1001&context=hst_facpubs)
3. Bleeding Albina: A History of Community Disinvestment, 1940 – 2000 – An accounting of the historical decisions and practices that led to community disinvestment in the Albina area of Portland (Gibson 2007). (http://kingneighborhood.org/wp-content/uploads/2015/03/BLEEDING-ALBINA_-A-HISTORY-OF-COMMUNITY-DISINVESTMENT-1940%E2%80%932000.pdf)

4. Making the Invisible Visible: Portland's Native American Community – A brief overview of the indigenous population in the Portland area. (Portland Indian Leader's Roundtable, 2009). (http://www.portlandindianleadersroundtable.org/images/pdf/MakingTheInvisibleVisible_2009PILR.pdf)

We also tried to acknowledge our own power in this process. The very act of analyzing and presenting quantitative data is itself powerful. Our hope is that this data can be seen as a trusted resource for our stakeholders to support their work. We know that many stakeholders will not feel that this report is complete, given the lack of available data for many identities. This is an issue that we hope to continue to work on by requesting more inclusive demographic information.

Appendix C: Employee Level for Non-Represented Employees

Levels are based on a 2014 Class Compensation project and have been updated to include any new job classifications that were not originally on the list.

Level	Category	Job Classification
1	Non-Represented/Non-Supervising (NR/NS)	AA/EEO Specialist
1	NR/NS	Administrative Analyst
1	NR/NS	Administrative Specialist NR
1	NR/NS	Assistant County Attorney 1
1	NR/NS	Assistant County Attorney 2
1	NR/NS	Assistant County Attorney Senior
1	NR/NS	Budget Analyst Principal
1	NR/NS	Budget Analyst Senior
1	NR/NS	Chaplain
1	NR/NS	Economist
1	NR/NS	Human Resources Analyst 1
1	NR/NS	Human Resources Analyst 2
1	NR/NS	Human Resources Analyst Senior
1	NR/NS	Human Resources Technician
1	NR/NS	Legal Assistant 1 NR
1	NR/NS	Legal Assistant 2 NR
1	NR/NS	Legal Assistant Senior NR
1	NR/NS	Legislative/Administrative Secretary
1	NR/NS	Management Assistant
1	NR/NS	Mgmt (Performance) Auditor
1	NR/NS	Mgmt (Performance) Auditor Principal
1	NR/NS	Mgmt (Performance) Auditor Senior
1	NR/NS	Office Assistant 2 NR
1	NR/NS	Office Assistant Senior NR
1	NR/NS	Paralegal
1	NR/NS	Payroll Specialist
1	NR/NS	Pharmacist
1	NR/NS	Research Scientist
1	NR/NS	Research/Evaluation Analyst Senior NR
1	NR/NS	Staff Assistant
1	NR/NS	Tax Supervisor/Budget Analyst
2	Supervisor/Front Line	Administrative Analyst Senior
2	Supervisor/Front Line	Administrative Services Officer
2	Supervisor/Front Line	Bridge Maintenance Supervisor
2	Supervisor/Front Line	Cataloging Administrator
2	Supervisor/Front Line	Cataloging Admr
2	Supervisor/Front Line	Chief Deputy Medical Examiner
2	Supervisor/Front Line	Communications Analyst Senior
2	Supervisor/Front Line	Community Justice Manager

2	Supervisor/Front Line	Dentist
2	Supervisor/Front Line	District Attorney Administrative Manager
2	Supervisor/Front Line	District Attorney Investigator Chief
2	Supervisor/Front Line	Elections Manager
2	Supervisor/Front Line	Engineering Services Manager 1
2	Supervisor/Front Line	Environmental Health Supervisor
2	Supervisor/Front Line	Finance Supervisor
2	Supervisor/Front Line	Fleet Maintenance Supervisor
2	Supervisor/Front Line	Health Services Development Administrator
2	Supervisor/Front Line	Human Resources Manager 1
2	Supervisor/Front Line	IT Manager 1
2	Supervisor/Front Line	IT Project Manager 1
2	Supervisor/Front Line	IT Supervisor
2	Supervisor/Front Line	Library Administrator
2	Supervisor/Front Line	Library Admr
2	Supervisor/Front Line	Library Supervisor
2	Supervisor/Front Line	MCSO Corrections Program Administrator
2	Supervisor/Front Line	MCSO Corrections Program Admr
2	Supervisor/Front Line	Nursing Development Consultant
2	Supervisor/Front Line	Nursing Supervisor
2	Supervisor/Front Line	Nutrition Services Manager
2	Supervisor/Front Line	Operations Administrator
2	Supervisor/Front Line	Operations Supervisor
2	Supervisor/Front Line	Ops Admr
2	Supervisor/Front Line	Ops Supervisor
2	Supervisor/Front Line	Physician Clinical Lead Provider
2	Supervisor/Front Line	Production Supervisor
2	Supervisor/Front Line	Program Supervisor
2	Supervisor/Front Line	Project Manager
2	Supervisor/Front Line	Public Relations Coordinator
2	Supervisor/Front Line	Records Administrator
2	Supervisor/Front Line	Road Operations Supervisor
2	Supervisor/Front Line	Road Ops Supervisor
2	Supervisor/Front Line	Survey Supervisor
3	Middle	Assistant District Attorney
3	Middle	Captain
3	Middle	Chief Appraiser
3	Middle	Chief Deputy
3	Middle	County Surveyor
3	Middle	Deputy Chief Information Officer
3	Middle	Deputy County Assessor
3	Middle	Deputy County Attorney
3	Middle	Deputy District Attorney Chief
3	Middle	Deputy District Attorney First Assistant
3	Middle	Deputy Health Officer
3	Middle	Deputy Medical Director
3	Middle	Division Director 1

3	Middle	Division Director 2
3	Middle	Engineering Services Manager 2
3	Middle	Executive Advisor
3	Middle	Facilities & Property Managment Division Director
3	Middle	Facilities & Property Mgmt Division Dir
3	Middle	Finance Manager
3	Middle	Finance Manager Senior
3	Middle	Health Centers Division Operations Director
3	Middle	Health Centers Division Ops Director
3	Middle	Human Resources Manager 2
3	Middle	Human Resources Manager Senior
3	Middle	IT Manager 2
3	Middle	IT Manager Senior
3	Middle	IT Project Manager 2
3	Middle	IT Security Manager
3	Middle	Library Director of Digital Strategies
3	Middle	Library Manager Branch
3	Middle	Library Manager Senior
3	Middle	Library Manager, Branch
3	Middle	Library Safety and Security Manager
3	Middle	Lieutenant
3	Middle	Lieutenant Corrections
3	Middle	Manager 2
3	Middle	Manager Senior
3	Middle	Nurse Practitioner Manager
3	Middle	Nursing Director
3	Middle	Principal Investigator
3	Middle	Principal Investigator Manager
3	Middle	Program Manager 1
3	Middle	Quality Manager
3	Middle	Undersheriff
3	Middle	Veterinarian
4	Top Level	Chief Financial Officer
4	Top Level	Chief Information Officer
4	Top Level	County Assessor
4	Top Level	County Attorney
4	Top Level	County Auditor
4	Top Level	County Chair
4	Top Level	County Commissioner
4	Top Level	County Engineer
4	Top Level	Dental Director
4	Top Level	Department Director 1
4	Top Level	Department Director 2
4	Top Level	Department Director Principal COO
4	Top Level	Deputy Director
4	Top Level	District Attorney
4	Top Level	EMS Medical Director

4	Top Level	Health Department Director
4	Top Level	Health Officer
4	Top Level	Health Services Development Admr
4	Top Level	Human Resources Director
4	Top Level	Integrated Clincial Services Director
4	Top Level	Integrated Clinical Services Director
4	Top Level	Medical Director
4	Top Level	Mental Health Director
4	Top Level	Pharmacy & Clinic Sup Services Director
4	Top Level	Pharmacy & Clinical Support Services Director
4	Top Level	Psychiatrist
4	Top Level	Sheriff
4	Top Level	Site Medical Director
4	Top Level	Strategic Capital Planning Director
4	Top Level	TSCC Executive Director

Appendix D: Job Classifications by EEO Code

JCN	Classification	EEO	EEO Group
6025	A&T Collection Specialist	46	Administrative support
6450	A&T Technician 1	43	Technicians
6451	A&T Technician 2	43	Technicians
9749	AA/EEO Specialist	42	Professionals
7212	Access Services Assistant	46	Administrative support
6291	Addictions Specialist	42	Professionals
6033	Administrative Analyst	46	Administrative support
9006	Administrative Analyst (NR)	42	Professionals
9005	Administrative Analyst Senior	46	Administrative support
6054	Administrative Assistant	46	Administrative support
6005	Administrative Specialist	46	Administrative support
9634	Administrative Specialist NR	46	Administrative support
6035	Alarm Ordinance Coordinator	42	Professionals
6155	Alarm Technician	43	Technicians
6062	Animal Care Aide	48	Service-maintenance
6065	Animal Care Technician	43	Technicians
6072	Animal Control Dispatcher	46	Administrative support
6069	Animal Control Officer 1	48	Service-maintenance
6067	Animal Control Officer 2	44	Protective service workers
6061	Animal Control Officer 3	44	Protective service workers
6105	Arborist/Vegetation Specialist	42	Professionals
9060	Assistant County Attorney 1	42	Professionals
9190	Assistant County Attorney 2	42	Professionals
9440	Assistant County Attorney Senior	42	Professionals
9449	Assistant District Attorney	42	Professionals
6248	Background Investigator	43	Technicians
6344	Basic Skills Educator	42	Professionals
6181	Body and Fender Technician	47	Skilled craft workers
6060	Bridge Maintenance Specialist	47	Skilled craft workers
9623	Bridge Maintenance Supervisor	41	Officials and administrators
6059	Bridge Operator	48	Service-maintenance
6026	Budget Analyst	42	Professionals
9734	Budget Analyst Principal	42	Professionals
9730	Budget Analyst Senior	42	Professionals
9808	Budget Director	41	Officials and administrators
6122	Building Automation Systems Specialist	47	Skilled craft workers
6055	Business Analyst Senior	42	Professionals
6501	Business Process Consultant	42	Professionals
9627	Captain	42	Professionals
6147	Carpenter	47	Skilled craft workers
6299	Case Management Assistant	46	Administrative support
6298	Case Manager 1	42	Professionals
6297	Case Manager 2	42	Professionals
6296	Case Manager Senior	42	Professionals
9773	Cataloging Admr	41	Officials and administrators

9007	Chaplain	42	Professionals
9630	Chief Appraiser	41	Officials and administrators
9625	Chief Deputy	41	Officials and administrators
9064	Chief Deputy Medical Examiner	41	Officials and administrators
9810	Chief Financial Officer	41	Officials and administrators
9668	Chief Human Resources Officer	41	Officials and administrators
9455	Chief Information Officer	41	Officials and administrators
6259	Civil Deputy	44	Protective service workers
6256	Civil Deputy Senior	44	Protective service workers
6003	Clerical Unit Coordinator	46	Administrative support
6036	Clinical Coordinator	42	Professionals
6318	Clinical Psychologist	42	Professionals
6295	Clinical Services Specialist	42	Professionals
8007	College Intern	Excluded	#N/A
9117	Communications Advisor	42	Professionals
6315	Community Health Nurse	42	Professionals
6046	Community Health Specialist 1	42	Professionals
6047	Community Health Specialist 2	42	Professionals
6013	Community Information Specialist	42	Professionals
9620	Community Justice Program Manager	41	Officials and administrators
6267	Community Works Leader	44	Protective service workers
6015	Contract Specialist	42	Professionals
6031	Contract Specialist Senior	42	Professionals
6011	Contract Technician	43	Technicians
6260	Cook	48	Service-maintenance
6268	Corrections Counselor	42	Professionals
6264	Corrections Hearings Officer	44	Protective service workers
2029	Corrections Officer	44	Protective service workers
4055	Corrections Sergeant	44	Protective service workers
6266	Corrections Technician	43	Technicians
9605	County Assessor	41	Officials and administrators
9510	County Attorney	41	Officials and administrators
6242	County Attorney Legal Intern	42	Professionals
5014	County Auditor	41	Officials and administrators
5001	County Chair	41	Officials and administrators
5010	County Commissioner	41	Officials and administrators
9676	County Engineer	41	Officials and administrators
9649	County Surveyor	41	Officials and administrators
7232	Creative Media Coordinator	43	Technicians
6073	Data Analyst	42	Professionals
6456	Data Analyst Senior	42	Professionals
6074	Data Technician	43	Technicians
6407	Database Administrator	42	Professionals
6408	Database Administrator Senior	42	Professionals
6346	Dental Assistant (EFDA)	43	Technicians
9499	Dental Director	41	Officials and administrators
6349	Dental Equipment Specialist	43	Technicians
6348	Dental Hygienist	43	Technicians

9390	Dentist	42	Professionals
9610	Department Director 1	41	Officials and administrators
9613	Department Director 2	41	Officials and administrators
9812	Department Director Principal COO	41	Officials and administrators
9461	Deputy Chief Information Officer	41	Officials and administrators
9618	Deputy County Assessor	42	Professionals
9631	Deputy County Attorney	41	Officials and administrators
9501	Deputy Dental Director	41	Officials and administrators
9619	Deputy Director	41	Officials and administrators
6251	Deputy District Attorney 1	42	Professionals
6252	Deputy District Attorney 2	42	Professionals
6253	Deputy District Attorney 3	42	Professionals
6254	Deputy District Attorney 4	41	Officials and administrators
9450	Deputy District Attorney Chief	41	Officials and administrators
9465	Deputy District Attorney First Assistant	41	Officials and administrators
9540	Deputy Health Officer	41	Officials and administrators
9541	Deputy Medical Director	41	Officials and administrators
6282	Deputy Medical Examiner	42	Professionals
6292	Deputy Public Guardian	42	Professionals
2025	Deputy Sheriff	44	Protective service workers
6405	Development Analyst	42	Professionals
6406	Development Analyst Senior	42	Professionals
6340	Dietitian (Nutritionist)	42	Professionals
6278	Digital Forensics Examiner	43	Technicians
6024	Disease Intervention Specialist	42	Professionals
5053	District Attorney	41	Officials and administrators
9664	District Attorney Administrative Manager	41	Officials and administrators
6249	District Attorney Investigator	44	Protective service workers
9445	District Attorney Investigator Chief	41	Officials and administrators
6244	District Attorney Legal Intern	42	Professionals
9601	Division Director 1	41	Officials and administrators
9602	Division Director 2	41	Officials and administrators
6124	Driver	48	Service-maintenance
6052	Economic Development Analyst	42	Professionals
9731	Economist	42	Professionals
9666	Elections Manager	41	Officials and administrators
8001	Elections Worker	46	Administrative support
3061	Electrician	47	Skilled craft workers
6143	Electronic Technician	43	Technicians
6142	Electronic Technician Assistant	43	Technicians
6144	Electronic Technician Chief	43	Technicians
6300	Eligibility Specialist	48	Service-maintenance
9530	EMS Medical Director	41	Officials and administrators
6235	Engineer 1	42	Professionals
6236	Engineer 2	42	Professionals
6311	Engineer 3	42	Professionals
9671	Engineering Services Manager 1	41	Officials and administrators
9672	Engineering Services Manager 2	41	Officials and administrators

6231	Engineering Technician 1	43	Technicians
6232	Engineering Technician 2	43	Technicians
6233	Engineering Technician 3	43	Technicians
6356	Environmental Health Specialist	42	Professionals
6358	Environmental Health Specialist Senior	42	Professionals
9062	Environmental Health Supervisor	41	Officials and administrators
6354	Environmental Health Trainee	42	Professionals
6360	Epidemiologist	42	Professionals
6361	Epidemiologist Senior	42	Professionals
6107	Equipment Property Technician	43	Technicians
9711	Executive Advisor	41	Officials and administrators
9679	Facilities & Property Mgmt Division Dir	41	Officials and administrators
6097	Facilities Maint Dispatch Scheduler	46	Administrative support
6010	Facilities Specialist 1	48	Service-maintenance
6017	Facilities Specialist 2	48	Service-maintenance
6016	Facilities Specialist 3	43	Technicians
9149	Facilities Strategic Plan & Proj Mgr	41	Officials and administrators
6258	Facility Security Officer	44	Protective service workers
9336	Finance Manager	41	Officials and administrators
9338	Finance Manager Senior	41	Officials and administrators
6029	Finance Specialist 1	42	Professionals
6030	Finance Specialist 2	42	Professionals
6032	Finance Specialist Senior	42	Professionals
9335	Finance Supervisor	41	Officials and administrators
6027	Finance Technician	43	Technicians
6184	Fleet & Support Services Specialist	46	Administrative support
9689	Fleet Maintenance Supervisor	41	Officials and administrators
6179	Fleet Maintenance Technician 1	47	Skilled craft workers
6180	Fleet Maintenance Technician 2	47	Skilled craft workers
6182	Fleet Maintenance Technician 3	47	Skilled craft workers
6261	Food Service Worker	48	Service-maintenance
6081	GIS Cartographer	43	Technicians
6082	GIS Cartographer Senior	43	Technicians
8008	Graduate Intern	43	Technicians
7207	Graphic Designer	43	Technicians
6293	Health Assistant 1	46	Administrative support
6294	Health Assistant 2	46	Administrative support
9551	Health Centers Division Ops Director	41	Officials and administrators
9521	Health Department Director	41	Officials and administrators
6352	Health Educator	42	Professionals
6321	Health Information Technician	46	Administrative support
6322	Health Information Technician Senior	43	Technicians
9550	Health Officer	41	Officials and administrators
6510	Health Policy Analyst Senior	42	Professionals
6320	Health Resident (Represented)	42	Professionals
9698	Health Svcs Development Administrator	42	Professionals
6083	Housing Development Specialist	42	Professionals
9080	Human Resources Analyst 1	42	Professionals

6103	Human Resources Analyst 2	42	Professionals
9670	Human Resources Analyst 2 (NR)	42	Professionals
9748	Human Resources Analyst Senior	42	Professionals
9715	Human Resources Manager 1	41	Officials and administrators
9621	Human Resources Manager 2	41	Officials and administrators
9669	Human Resources Manager Senior	41	Officials and administrators
6101	Human Resources Technician	46	Administrative support
9061	Human Resources Technician (NR)	43	Technicians
6301	Human Services Investigator	42	Professionals
9700	Human Services Policy Manager	41	Officials and administrators
6123	HVAC Assistant	47	Skilled craft workers
6121	HVAC Engineer	47	Skilled craft workers
6044	Industrial Appraiser	42	Professionals
6415	Information Specialist 1	43	Technicians
6416	Information Specialist 2	42	Professionals
6417	Information Specialist 3	42	Professionals
9699	Integrated Clinical Services Director	41	Officials and administrators
8002	Interpreter (On Call)	46	Administrative support
6109	Inventory/Stores Specialist 1	48	Service-maintenance
6110	Inventory/Stores Specialist 2	43	Technicians
6104	Inventory/Stores Specialist 3	48	Service-maintenance
6280	Investigative Support Specialist	46	Administrative support
9807	Investment Officer	41	Officials and administrators
6413	IT Architect	42	Professionals
6194	IT Business Consultant	42	Professionals
6198	IT Business Consultant Senior	42	Professionals
9452	IT Manager 1	41	Officials and administrators
9453	IT Manager 2	41	Officials and administrators
9454	IT Manager Senior	41	Officials and administrators
9458	IT Project Manager 1	41	Officials and administrators
9459	IT Project Manager 2	41	Officials and administrators
9456	IT Security Manager	41	Officials and administrators
9451	IT Supervisor	41	Officials and administrators
6285	Juvenile Counseling Assistant	48	Service-maintenance
6272	Juvenile Counselor	42	Professionals
6273	Juvenile Custody Services Specialist	44	Protective service workers
8274	Juvenile Custody Services Specialist OC	44	Protective service workers
6095	Laborer	48	Service-maintenance
9055	Law Clerk	42	Professionals
6243	Legal Assistant 1	46	Administrative support
9002	Legal Assistant 1 NR	46	Administrative support
6246	Legal Assistant 2	46	Administrative support
9003	Legal Assistant 2 NR	46	Administrative support
6241	Legal Assistant Senior	46	Administrative support
9004	Legal Assistant Senior NR	46	Administrative support
9001	Legislative/Administrative Secretary	46	Administrative support
7222	Librarian	42	Professionals
9776	Library Administrator	41	Officials and administrators

7211	Library Assistant	46	Administrative support
7202	Library Clerk	46	Administrative support
9783	Library Director of Digital Strategies	41	Officials and administrators
9780	Library Manager	41	Officials and administrators
9782	Library Manager Senior	41	Officials and administrators
7223	Library Outreach Specialist	42	Professionals
7203	Library Page	46	Administrative support
9152	Library Safety and Security Manager	41	Officials and administrators
6117	Library Safety Officer	44	Protective service workers
9784	Library Supervisor	41	Officials and administrators
6303	Licensed Community Practical Nurse	43	Technicians
9705	Lieutenant	41	Officials and administrators
9647	Lieutenant Corrections	41	Officials and administrators
6100	Lighting Technician	47	Skilled craft workers
6149	Locksmith	47	Skilled craft workers
6108	Logistics Evidence Technician	46	Administrative support
6176	Maintenance Specialist 1	47	Skilled craft workers
6177	Maintenance Specialist 2	47	Skilled craft workers
6175	Maintenance Specialist Apprentice	48	Service-maintenance
6096	Maintenance Specialist Senior	47	Skilled craft workers
6092	Maintenance Worker	48	Service-maintenance
9710	Management Assistant	42	Professionals
9010	Management Auditor	42	Professionals
9279	Management Auditor Principal	42	Professionals
9280	Management Auditor Senior	42	Professionals
9615	Manager 1	41	Officials and administrators
9364	Manager 2	41	Officials and administrators
9365	Manager Senior	41	Officials and administrators
6369	Marriage and Family Counselor	42	Professionals
6309	Marriage and Family Counselor Associate	42	Professionals
9202	MCSO Corrections Program Admr	41	Officials and administrators
6151	MCSO Records Coordinator	46	Administrative support
6150	MCSO Records Technician	46	Administrative support
6012	Medical Assistant	48	Service-maintenance
9520	Medical Director	41	Officials and administrators
6333	Medical Laboratory Technician	43	Technicians
6335	Medical Technologist	43	Technicians
6304	Medication Aide (CNA)	48	Service-maintenance
6365	Mental Health Consultant	42	Professionals
9744	Mental Health Director	41	Officials and administrators
6125	Motor Pool Attendant	48	Service-maintenance
6201	Multimedia/Video Production Specialist	42	Professionals
6410	Network Administrator Senior	42	Professionals
6359	Nuisance Enforcement Officer	44	Protective service workers
6314	Nurse Practitioner	42	Professionals
9493	Nurse Practitioner Manager	42	Professionals
9518	Nursing Development Consultant	42	Professionals
9519	Nursing Director	41	Officials and administrators

9517	Nursing Supervisor	41	Officials and administrators
6342	Nutrition Assistant	43	Technicians
9020	Nutrition Services Manager	41	Officials and administrators
6000	Office Assistant 1	46	Administrative support
6001	Office Assistant 2	46	Administrative support
9011	Office Assistant 2 (NR)	46	Administrative support
6002	Office Assistant Senior	46	Administrative support
9636	Office Assistant Senior NR	46	Administrative support
9720	Operations Administrator	41	Officials and administrators
6500	Operations Process Specialist	42	Professionals
9025	Operations Supervisor	41	Officials and administrators
9054	Paralegal	46	Administrative support
6286	Pathologist Assistant	43	Technicians
9337	Payroll Tax Specialist	42	Professionals
6270	Peer Support Specialist	48	Service-maintenance
9355	Pharmacist	42	Professionals
9357	Pharmacy & Clinic Support Svcs Director	41	Officials and administrators
6119	Pharmacy Technician	43	Technicians
6317	Physician	42	Professionals
9492	Physician (On Call)	42	Professionals
6316	Physician Assistant	42	Professionals
6068	Planner 1	42	Professionals
6075	Planner 2	42	Professionals
9146	Planner Principal	42	Professionals
6078	Planner Senior	42	Professionals
9798	Principal Investigator	41	Officials and administrators
9797	Principal Investigator Manager	41	Officials and administrators
7209	Printing Specialist	43	Technicians
6276	Probation/Parole Officer	44	Protective service workers
6112	Procurement Analyst	42	Professionals
6111	Procurement Analyst Senior	42	Professionals
6115	Procurement Associate	46	Administrative support
7230	Production Assistant	43	Technicians
9677	Production Supervisor	41	Officials and administrators
6341	Program Aide	46	Administrative support
6200	Program Communications Coordinator	42	Professionals
6178	Program Communications Specialist	42	Professionals
6022	Program Coordinator	42	Professionals
6021	Program Specialist	42	Professionals
6088	Program Specialist Senior	42	Professionals
9361	Program Supervisor	41	Officials and administrators
6020	Program Technician	43	Technicians
9063	Project Manager (NR)	42	Professionals
6063	Project Manager Represented	42	Professionals
6051	Property Appraiser 1	42	Professionals
6042	Property Appraiser 2	42	Professionals
6113	Property Management Specialist	42	Professionals
6114	Property Management Specialist Senior	42	Professionals

9491	Psychiatrist	42	Professionals
6089	Public Affairs Coordinator	42	Professionals
6355	Public Health Ecologist	42	Professionals
6093	Public Health Vector Specialist	43	Technicians
9790	Public Relations Coordinator	41	Officials and administrators
9366	Quality Manager	41	Officials and administrators
6116	Records Administration Assistant	46	Administrative support
9732	Records Administrator	41	Officials and administrators
6157	Records Technician	46	Administrative support
6085	Research Evaluation Analyst 1	42	Professionals
6086	Research Evaluation Analyst 2	42	Professionals
6087	Research Evaluation Analyst Senior	42	Professionals
9043	Research Evaluation Analyst Senior (NR)	42	Professionals
9041	Research Evaluation Scientist	42	Professionals
6211	Right-of-Way Permits Specialist	42	Professionals
9140	Road Operations Supervisor	41	Officials and administrators
6418	SAP Developer	42	Professionals
6419	SAP Developer Senior	42	Professionals
6284	Secure Treatment Services Specialist	44	Protective service workers
2005	Sergeant	44	Protective service workers
6245	Sewing Specialist	47	Skilled craft workers
8005	Shelver (On Call)	46	Administrative support
5004	Sheriff	41	Officials and administrators
3105	Sign Fabricator	47	Skilled craft workers
9490	Site Medical Director	41	Officials and administrators
9400	Staff Assistant	41	Officials and administrators
9809	Strategic Capital Planning Director	41	Officials and administrators
6098	Striper Operator	48	Service-maintenance
8006	Student Intern	46	Administrative support
6250	Support Enforcement Agent	44	Protective service workers
6091	Survey Specialist	42	Professionals
9674	Survey Supervisor	41	Officials and administrators
6414	Systems Administrator	42	Professionals
6412	Systems Administrator Senior	42	Professionals
6045	Tax Exemption Specialist	42	Professionals
1096	Tax Supervisor/Budget Analyst	42	Professionals
8000	Temporary Worker	46	Administrative support
6076	Transportation Planning Specialist	42	Professionals
6234	Transportation Project Specialist	42	Professionals
3005	TSCC Executive Director	41	Officials and administrators
9626	Undersheriff	41	Officials and administrators
6290	Veterans Services Officer	42	Professionals
9746	Veterinarian	42	Professionals
6066	Veterinary Technician	43	Technicians
6247	Victim Advocate	48	Service-maintenance
6084	Weatherization Inspector	43	Technicians
6336	X-Ray Technician	43	Technicians