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Internal Audit Overview
"Vigilance Through Knowing"

CHIEFS OFFICE

KCPD
Internal Audit
Unit

Workers' Compensation Annual Report 13-05

August, 2013

Objectives

- Annual cost trend analysis of the Department's Workers' Compensation cost data.
- Annual trend and pattern analysis of its Workers' Compensation incident data.

Methodology and Scope

- The primary data source for this report is the RiskMaster system utilized by the Department. The RiskMaster system is a database that stores many data fields about each workers' compensation incident.
- The scope of this report is primarily limited to the Workers' Compensation data provided by RiskMaster.

Findings

1. Expenses were on the decline from 2009 until 2012 which showed an increase in expenses, 2013, however, began a new decline in the 5 year cycle.
2. "Injured during arrest" continues to be the category with the greatest number of injuries, closely followed by vehicular accidents.
3. The most common body part injured during arrest was the hand.
4. Overall the knee was the most injured body part, regardless of activity.
5. The position of police officer has the largest number of total injuries.
6. 37% of employees (that had a workers' compensation claim) were involved in two or more incidents between fiscal years 2009 through 2013.
7. The five year average of incidents resulting in loss time was 12.03%.
8. The activity which resulted in the greatest loss time was by far vehicular accidents.
9. The body part which resulted in the greatest frequency of loss time was knee, followed by ankle.
10. "Contusion" was the most common injury description listed for fiscal years 2009-2013.

For further information please contact:

Officer Christopher Kincaid, 234-5077,
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Endorsement Page

Re: Worker's Compensation Report, 13-05

Unit/Section Supervisor

Unit Commander

Major Young,

Recommend forwarding this report to the Chief for his review and then distributing copies of the report to all Bureau Commanders. Also I recommend presenting the report to the Audit Committee.



Division Commander

Bureau Commander

Chief of Police

Approved - cc: Bureau's/DGC
A/COP *Randal Huns* 08/28/2013

Worker's Compensation Annual Report 13-05

August, 2013

Internal Audit Unit
Kansas City, Missouri Police Department

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Introduction

On 06/27/2013, the Manager of the Internal Audit Unit directed me to prepare the Workers' Compensation annual report.

Scope

The scope of this report is limited to the Workers' Compensation data provided by Riskmaster.

Objectives

- Annual cost trend of the Department's Workers' Compensation cost data.
- Annual trend and pattern analysis of its Workers' Compensation incident data.

Methodology

The primary data source for this report and the city's audit is the RiskMaster system utilized by the Department. The RiskMaster system is a database that stores many data fields about each workers' compensation incident.

Discussion

This yearly report came about from a 2010 city audit titled, *Performance Audit Police Department Workers Compensation*. The city audit was produced to analyze the Police Department's Workers Compensation and determine if there were any patterns involving workers compensation claims.

Since the city's audit was completed, it was requested that the Internal Audit Unit produce a yearly report in regard to workers compensation, looking for trends and patterns in the information. The information gathered for this audit covers fiscal years 2009 through 2013.

Expenses

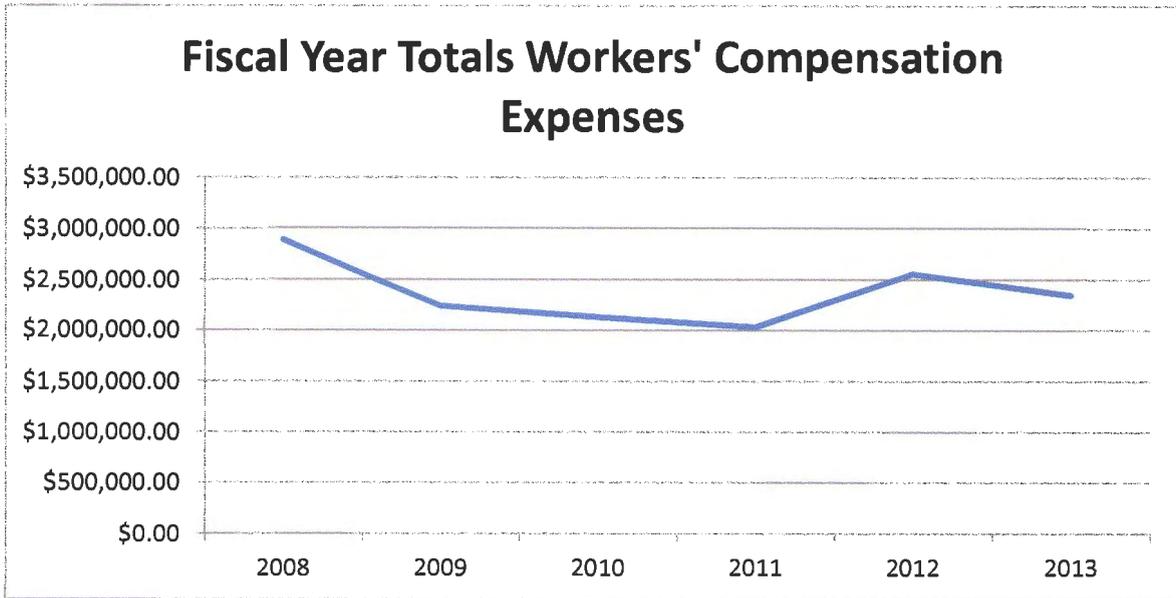
The information provided in this table was provided by the accounting section of the police department. Category D (HR Staff Salary) is an estimation of expenses and has been modified since the original calculations were performed. The City's calculation included three individual's salaries and benefits as a percentage of the time that was spent dealing with workers' compensation. The percentages of those three individuals was 25%, 90% and 90% of salary and benefits. However, upon interviewing those same three individuals, the percentages have been modified to 20%, 75%, and 75%.

Report Date Range: 5/1/2008 - 4/30/2013

Workers' Compensation Expenses

expense	fiscalYear				
	2009	2010	2011	2012	2013
	\$	\$	\$	\$	\$
A- Medical Claims	\$1,088,837.00	\$1,212,432.25	\$1,077,477.04	\$1,324,682.66	\$1,219,707.17
B- Beneficiary Payments	\$112,761.00	\$111,323.33	\$110,892.08	\$100,546.88	\$70,683.34
C- Settlements	\$271,308.00	\$445,458.85	\$305,336.18	\$330,052.32	\$497,095.62
D- HR Staff Salary	\$152,996.00	\$126,565.88	\$129,313.91	\$130,106.54	\$130,106.54
E- Billing Services	\$136,297.00	\$167,521.38	\$107,372.06	\$194,210.91	\$133,260.37
F- Extra WkComp Ins	\$118,996.00	\$117,656.00	\$116,920.00	\$131,007.00	\$148,232.00
G- Liab/Prop Ins	\$2,254.00	\$1,254.00	\$1,254.00		\$2,508.00
H- Taxes 2Inj & Self	\$183,535.00	\$70,662.21	\$169,395.72	\$106,173.79	\$128,733.20
I- Audit/Actuarial		\$2,000.00	\$16,500.00	\$27,000.00	\$25,500.00
J- Self Ins Escrow				\$238,048.00	\$2,508.00
K- Training			\$3,438.50		
L- Software Mnt RSK MSTR		\$8,110.00			
M- Curr Yr Encumb	\$207,077.00	\$70,658.41	\$61,326.16	\$39,280.96	\$25,065.38
N- Prior Yr Encumb	(\$35,740.00)	(\$207,076.91)	(\$70,658.41)	(\$61,326.16)	(\$39,280.96)
Grand Total	\$2,238,321.00	\$2,126,565.40	\$2,028,567.24	\$2,559,782.90	\$2,344,118.66

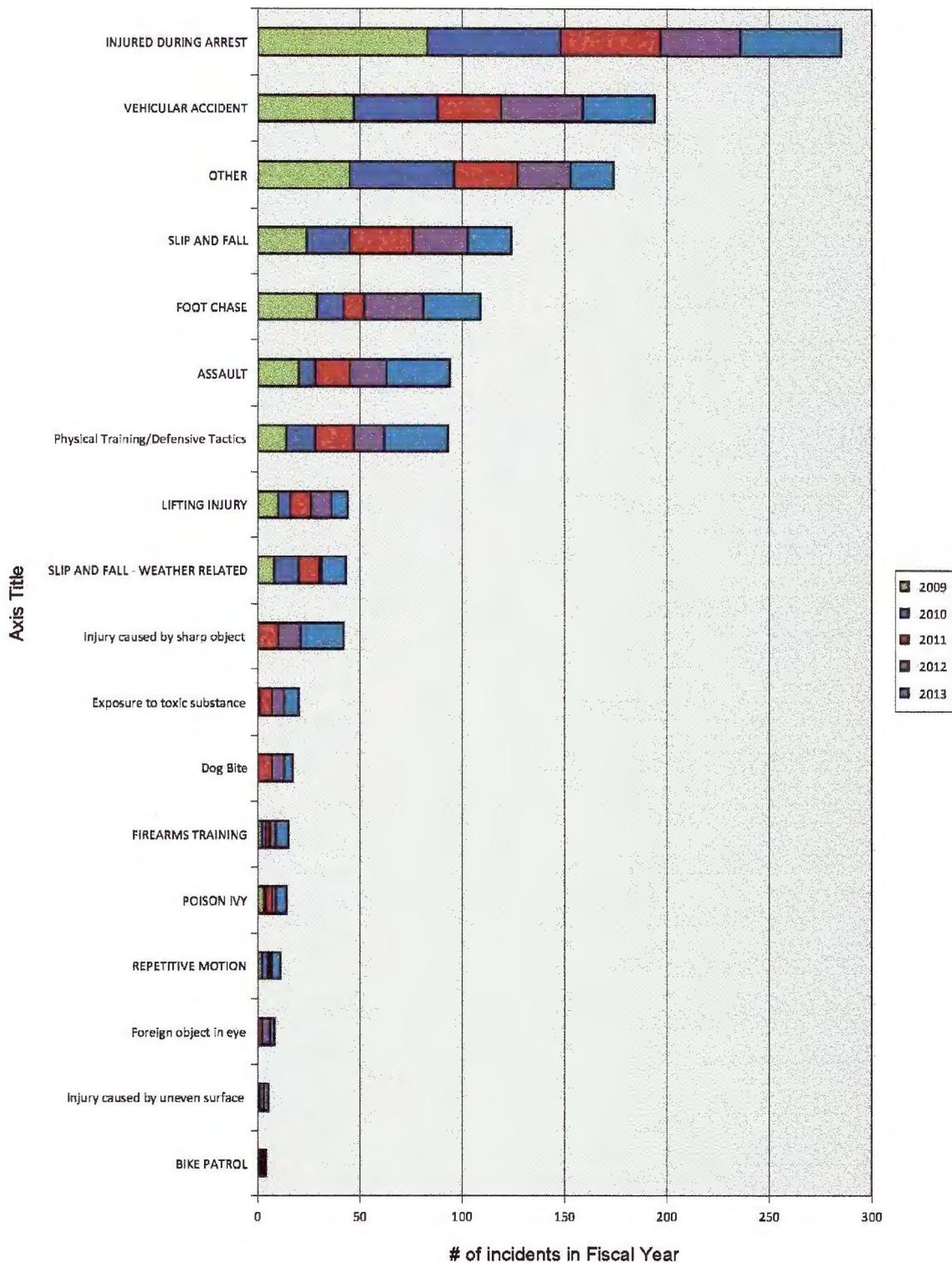
Depicted in the chart below, in Fiscal years 2009-2013 the trend of Worker's Compensation was on the decline. A spike of costs appears in 2012 and then a slight decline in 2013.



Incidents By Service

Service	FiscalYear						Grand Total
	2009	2010	2011	2012	2013		
	Sum of Count						
INJURED DURING ARREST	83	65	49	39	49	285	
VEHICULAR ACCIDENT	47	41	31	40	35	194	
OTHER	45	51	31	26	21	174	
SLIP AND FALL	24	21	31	27	21	124	
FOOT CHASE	29	13	10	29	28	109	
ASSAULT	20	8	17	18	31	94	
Physical Training/Defensive Ta	14	14	19	15	31	93	
LIFTING INJURY	10	6	10	10	8	44	
SLIP AND FALL - WEATHER REL	8	12	10	1	12	43	
Injury caused by sharp object			10	11	21	42	
Exposure to toxic substance		1	6	6	7	20	
Dog Bite			7	6	4	17	
FIREARMS TRAINING	2	2	2	3	6	15	
POISON IVY	3	1	3	2	5	14	
REPETITIVE MOTION	2	3	1	1	4	11	
Foreign object in eye			2	4	2	8	
Injury caused by uneven surfac			1	2	2	5	
BIKE PATROL		1	1	1	1	4	
Grand Total	287	239	241	241	288	1296	

The incident by service chart helps to determine the most common activities that employees were engaged in at the time of an injury. The largest groups were “Injured during arrest” and “Vehicular accident”. These two categories accounted for almost 37% of all injuries over the 5 year time period.



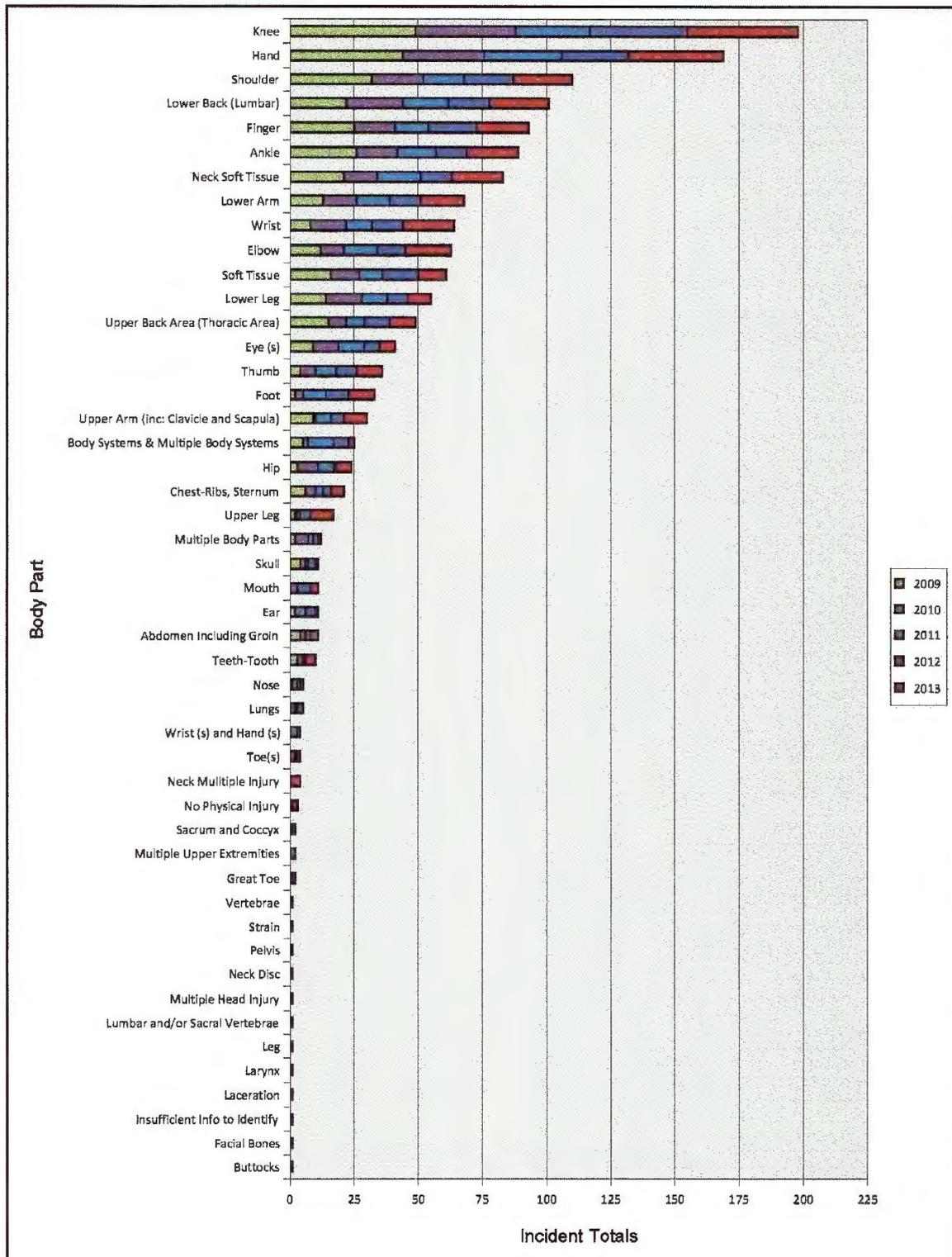
The above chart displays the aggregate numbers for each type of service for the listed time period. This is a graphical representation of the information contained in the previous table. The colors indicate the rate at which each fiscal year contributed to the aggregate number. The colors might indicate that while a certain category may lead in overall incident number, the rate may be decreasing.

Body Part Data

The Body Part Injuries table displays the top 25 body part injuries by fiscal year. The table indicates that knee, hand, and shoulder are the most common injuries. It should be noted that an incident may injure more than one body part. Therefore, the total number of injuries can be more than the number of incidents in a given time period.

BodyPart	Fiscal Year					Grand Total
	2009	2010	2011	2012	2013	
Knee	49	39	29	38	43	198
Hand	44	32	30	26	37	169
Shoulder	32	20	16	19	23	110
Lower Back (Lumbar)	22	22	18	16	23	101
Finger	25	16	13	19	20	93
Ankle	26	16	15	12	20	89
Neck Soft Tissue	21	13	17	12	20	83
Lower Arm	13	13	13	12	17	68
Wrist	8	14	10	12	20	64
Elbow	12	9	13	11	18	63
Soft Tissue	16	11	9	14	11	61
Lower Leg	14	14	10	8	9	55
Upper Back Area (Thoracic Area)	15	7	7	10	10	49
Eye (s)	9	10	10	6	6	41
Thumb	4	6	8	8	10	36
Foot	2	3	9	9	10	33
Upper Arm (Inc: Clavicle and Scapula)	9	1	6	5	9	30
Body Systems & Multiple Body Systems	5	2	10	6	2	25
Hip	3	8	6	1	6	24
Chest-Ribs, Sternum	6	4	3	3	5	21
Upper Leg	2	1	1	4	9	17
Multiple Body Parts	2	5	2	2	1	12
Abdomen Including Groin	4	2	2		3	11
Ear	2		4	4	1	11
Mouth		3		5	3	11
Grand Total	345	271	261	262	336	1475

Body Part Incident Chart



The body part incident chart displays the aggregate numbers for each type of body part for the listed time period. This is a graphical representation of the

information contained in the previous table. The colors indicate the rate at which each fiscal year contributed to the aggregate number. The colors might indicate that while a certain category may lead in overall incident number, the rate may be decreasing

Body Part Incidents by Service

BodyPart Injuries By Service

Service	BodyPart			
	Knee	Hand	Shoulder	Grand Total
	#	#	#	#
INJURED DURING ARREST	47	60	21	128
FOOT CHASE	35	26	5	66
SLIP AND FALL	43	12	7	62
VEHICULAR ACCIDENT	18	12	29	59
ASSAULT	18	15	4	37
OTHER	10	16	8	34
Physical Training/Defensive Tactics	10	1	15	26
SLIP AND FALL - WEATHER RELATED	8	2	8	18
LIFTING INJURY	3	1	11	15
Injury caused by sharp object	3	11		14
Exposure to toxic substance		6		6
Dog Bite	1	3		4
FIREARMS TRAINING	1	2		3
REPETITIVE MOTION		2	1	3
BIKE PATROL			1	1
Injury caused by uneven surface	1			1
Grand Total	198	169	110	477

The above table depicts the top 3 body parts injured in relation to the type of activity being performed at the time of injury. The totals are displayed in the aggregate for the listed time frame (FY 09-13). Knee and hand injuries most often occur during arrest activities. However, shoulder injuries most often occur in vehicular accidents.

Percentage of Division Employees By Incidents

In the following table, some of the Divisions with extremely low incident data were eliminated from the table. This table compares the number of injuries to the number of budgeted positions in the listed divisions.

The “#” category indicates the total number of injuries for that year at that division. The “Pos” category indicates the total number of positions assigned to that division. This information was obtained from the department’s budget unit.

The “%” category displays the total number of injuries divided by the total number of positions and displayed as a percentage.

Division	FiscalYear														
	2009			2010			2011			2012			2013		
	Inj	Pos	%	Inj	Pos	%	Inj	Pos	%	Inj	Pos	%	Inj	Pos	%
Training	8	83	9.64%	7	52	13.46%	10	52	19.23%	10	50	20.00%	33	50	66.00%
East	48	216	22.22%	38	223	17.04%	47	207	22.71%	35	206	16.99%	54	206	26.21%
Narcotics and Vic	11	91	12.09%	18	112	16.07%	14	102	13.73%	17	103	16.50%	18	70	25.71%
Center	57	224	25.45%	41	237	17.30%	46	220	20.91%	55	230	23.91%	53	228	23.25%
Metro	37	195	18.97%	43	201	21.39%	32	185	17.30%	40	185	21.62%	40	187	21.39%
Special Tactics ar													7	45	15.56%
North	8	109	7.34%	11	114	9.65%	12	114	10.53%	8	114	7.02%	16	112	14.29%
South	14	117	11.97%	8	123	6.50%	11	122	9.02%	9	120	7.50%	16	120	13.33%
Chief's Office													2	15	13.33%
Shoal Creek	14	101	13.86%	9	107	8.41%	10	107	9.35%	10	106	9.43%	13	106	12.26%
Management an													6	49	12.24%
Research and De													2	19	10.53%
Human Resource													3	29	10.34%
Professional Star													4	45	8.89%
Regional Crimina				1	74	1.35%	2	76	2.63%				6	72	8.33%

This table shows a dramatic rise in the Training Division number of injuries. The reason for this rise was we had 22 entrant officer budgeted positions for FY 2013. During this time period, 21 Entrant Officer were injured, most during Physical Training/Defensive Tactics. The majority of these Entrant Officer injuries were sprains/strains.

Patrol Division Incidents By Service

The following table depicts the number of incidents for the Patrol Bureau. The Patrol Bureau leads all other bureaus in injuries and as depicted in this table, the three inner-city stations have the highest number of injuries. It should also be noted that these three stations also have more staffing than the other stations.

Incidents By Patrol-Division And Service

Service	divisionName							Grand Total
	Central	East	Metro	North	Shoal Creek	South		
	#	#	#	#	#	#	#	
INJURED DURING ARREST	69	59	53	20	15	15	231	
VEHICULAR ACCIDENT	37	37	29	9	13	5	130	
FOOT CHASE	34	31	19	3	4	6	97	
SLIP AND FALL	28	20	12	4	4	6	74	
ASSAULT	22	22	11	3	4	8	70	
OTHER	14	15	15	4	4	6	58	
SLIP AND FALL - WEATHER RELATED	3	7	6	5	1	3	25	
Injury caused by sharp object	5	6	4	1	2	3	21	
Physical Training/Defensive Tactics	6	2	5	2	2	1	18	
LIFTING INJURY	5	3	2	2	2	3	17	
Dog Bite	2	4	2	1	1		10	
Exposure to toxic substance	1	5	2	1			9	
POISON IVY	2	2	4				8	
FIREARMS TRAINING	2	2	1			1	6	
Injury caused by uneven surface	1		1		2		4	
BIKE PATROL	2		1				3	
Foreign object in eye	1		1				2	
REPETITIVE MOTION			1			1	2	
Grand Total	234	215	169	55	54	58	785	

Position

The "Police Officer" position accounts for a large majority of incidents. This information is not a surprise since most incidents occur during arrests.

The "#" category indicates the total number of injuries for that year at that rank or position. The "PO" category indicates the total number of positions appropriated for that rank or position. This information was obtained from the department's budget unit. The "%" category displays the total number of injuries divided by the total number of positions and displayed as a percentage.

Position	Fiscal Year														
	2009			2010			2011			2012			2013		
	#	PC	%	#	PC	%	#	PC	%	#	PC	%	#	PC	%
Captain	0	52	0.00%	1	57	1.75%	1	54	1.85%	1	51	1.96%	1	51	1.96%
Civilian	32	640	5.00%	30	680	4.41%	40	686	5.83%	30	681	4.41%	32	669	4.78%
Deputy Chief													1	5	20.00%
Detective	5	240	2.08%	11	242	4.55%	6	244	2.46%	12	233	5.15%	7	233	3.00%
Detention Fac	5	44	11.36%	4	50	8.00%	3	50	6.00%	4	50	8.00%	5	50	10.00%
Entrant Office	4	49	8.16%	3	48	6.25%	6	48	12.50%	4	48	8.33%	21	22	95.45%
Police Officer	200	885	22.60%	163	884	18.44%	170	882	19.27%	178	849	20.97%	219	848	25.83%
Sergeant	7	234	2.99%	20	230	8.70%	8	230	3.48%	13	231	5.63%	15	233	6.44%

Incidents By Day

The table below is informational only and would not take into account a rotating days off work schedule. Therefore, assuming that any given day is a day back from work by all employees would not be accurate. The chart does indicate that Friday, Saturday and Sunday have the lowest per day totals. It should be noted that no one comes back from r-days and begins their work week on Sunday.

Incident by day

		FiscalYear ▼					
		2009	2010	2011	2012	2013	Grand Total
		+ -	+ -	+ -	+ -	+ -	+ -
Day ▼	#	#	#	#	#	#	#
Sunday	+	29	28	34	19	27	137
Monday	+	48	31	36	30	55	200
Tuesday	+	49	41	42	42	50	224
Wednesday	+	42	41	43	48	48	222
Thursday	+	43	47	30	35	46	201
Friday	+	37	27	29	31	34	158
Saturday	+	39	24	27	36	28	154
Grand Total	+	287	239	241	241	288	1296

Incidents By Time Of Day

This table provides further detail about the incident day of week and time. The table suggests that employees working the “overnight” shift are less likely to be involved in a workers’ compensation incident.

Morning 0600 – 1159 hours

Afternoon: 1200 – 1759 hours

Evening: 1800 – 2359 hours

Overnight: 0000 – 0559 hours

Time Of Day

	TOD ▼				
	1. Morning	2. Afternoon	3. Evening	4. Overnight	Grand Total
WeekName ▼	#	#	#	#	#
Sunday	15	29	50	43	137
Monday	62	74	42	22	200
Tuesday	75	73	50	26	224
Wednesday	59	62	73	28	222
Thursday	60	63	39	39	201
Friday	52	33	50	23	158
Saturday	21	44	50	39	154
Grand Total	344	378	354	220	1296

Frequency Of Incidents By Employee

Employees Number Of Injuries

Number of Injuries ▼	Number of Employees ▼
1	511
2	187
3	70
4	32
5	7
6	5
8	1

The above table depicts the number of injuries incurred by an individual over the listed period of time (fiscal years 2009 through 2013). There were 813 employees that were involved in 1296 workers' compensation incidents. 37% of employees (that had a workers' compensation claim) were involved in two or more incidents between fiscal years 2009 through 2013.

Additional Tables and Charts

Incidents – Loss Time

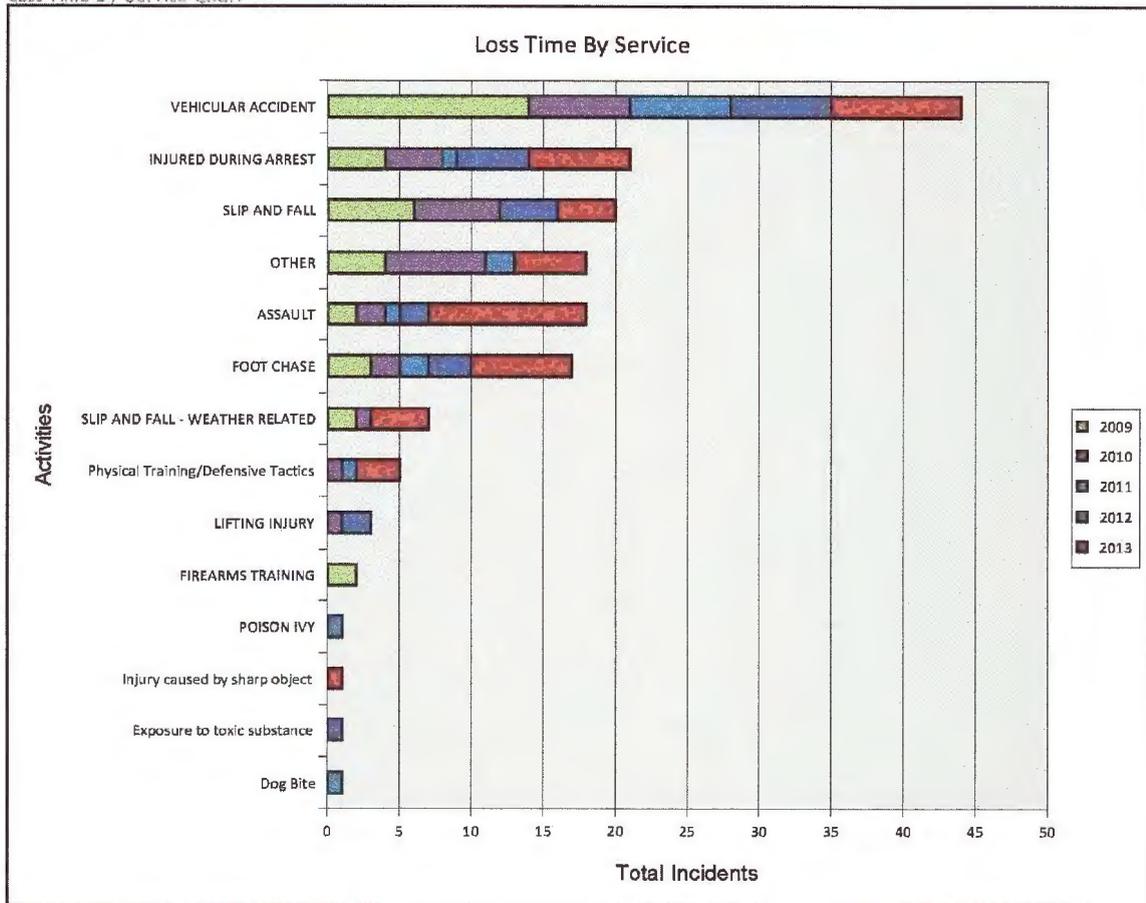
Loss Time

LossTime	FiscalYear														
	2009			2010			2011			2012			2013		
	#	TOT	%	#	TOT	%	#	TOT	%	#	TOT	%	#	TOT	%
LT	37	287	12.89%	31	239	12.97%	16	241	6.64%	24	241	9.96%	51	288	17.71%

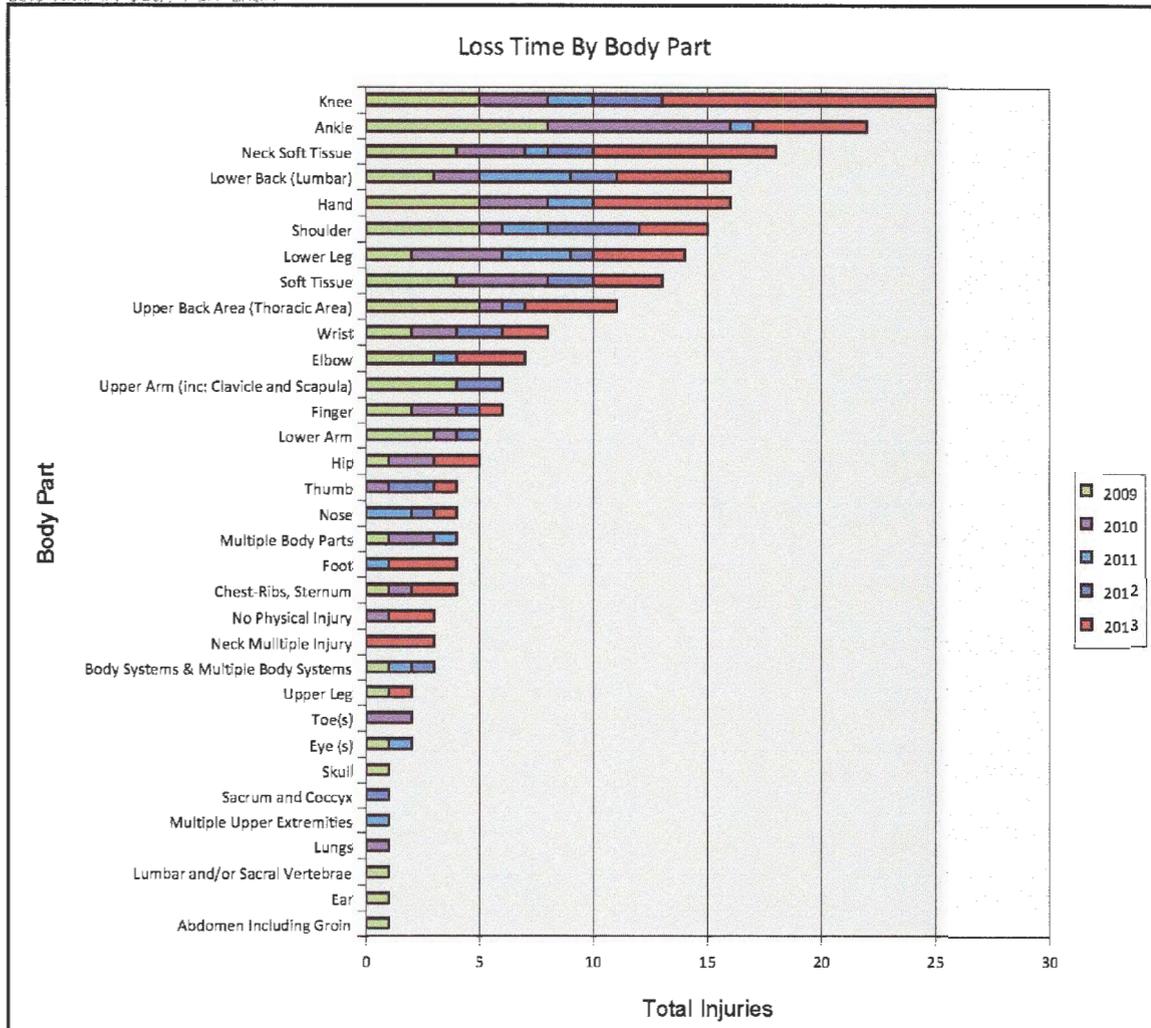
In the above table, the “#” category indicates the total number of injuries that resulted in lost time. The “TOT” category indicates the total number of incidents that occurred for the listed fiscal year. The “%” category displays the total number of injuries that resulted in lost time divided by the total number of incidents for the fiscal year and displayed as a percentage. Although the table does not display the five year average, it can be calculated from the data listed by adding the listed percentages and dividing by five. The average percentage of loss time for fiscal years 2009 through 2013 was 12.03%.

The following charts provide more information about the incidents that require time off from work. In addition, the activity which resulted in the greatest loss time was vehicular accident. The body part injury which resulted in the greatest frequency of loss time was Knee followed by Ankle.

Loss Time By Service Chart



Loss Time By Body Part Chart



These tables do not show how much aggregate “Loss Time” occurred. But, they do provide an idea of the number of incidents, the specific activities and body part injuries that are resulting from incidents that require missed time from work.

Reported Date

Date Range ▾	Frequency ▾
0	1110
1	74
2	25
3	14
4	10
5	5
6	9
7	6
8	8
9	3
10	1
12	2
13	2
14	1
15	1
16	2
17	1
21	1
23	2
25	1
27	1
29	1
30	2
31	1
34	2
35	1
53	2
56	1
57	1
71	1
83	1
84	1
93	1
145	1
327	1

Time Between Incident Occurring and Reported

The table displays the number of days between when the incident occurred and when the report was made. For example, the group "0" in date range means that the date the incident was reported and the injury date were the same day. There were 0 days between the two dates. The table represents 1296 total incidents for the time period, fiscal years 2009 through 2013. The majority of incidents are reported on the same date (85.64%). However, the table does display an incident that was reported 327 days after the incident occurred.

Incident By Years Of Service Cohort

Incident By Years of Service Cohort

Cohort	FiscalYear					
	2009	2010	2011	2012	2013	Grand Total
	#	#	#	#	#	#
1. 0-3	68.00	35.00	29.00	28.00	55.00	215.00
2. 3-6	64.00	52.00	77.00	51.00	54.00	298.00
3. 6-9	55.00	44.00	37.00	36.00	37.00	209.00
4. 9-12	34.00	30.00	20.00	37.00	46.00	167.00
5. 12-15	22.00	23.00	25.00	29.00	33.00	132.00
6. 15-18	19.00	25.00	23.00	16.00	21.00	104.00
7. 18-21	10.00	7.00	11.00	11.00	23.00	62.00
8. 21+	15.00	23.00	19.00	33.00	19.00	109.00

This table indicates that individuals with less time on the department make up the majority of injuries when simply breaking down the incident totals by years of service. No additional analysis was done to determine the number of employees that are assigned to each cohort. This would have been difficult to determine for historical purposes. Therefore, while the 0-3 and 3-6 cohort categories make up the most injuries, it might also have been that those groups also contained more employees than other groups.

Comparing this table with the table in last year's report (FY 2008-2012) cohort #1 (0-3 years) went from 277 down to 215. Cohort #2 (3-6 years) dropped slightly from 307 to 298. Cohort #3 (6-9 years) dropped from 223 to 209. Cohort #4 (9-12 years) increased from 152 to 167. Cohort #5 (12-15 years) decreased by 2 to 132. Cohort #6 (15-18 years) increased from 95 to 104. Cohort #7 (18-21 years) increased from 51 to 62. Cohort #8 (21+ years) increased from 107 to 109.

Incident by Years of Service Cohort and Bureau

The following table prepared in order to display the breakdown of injuries by Bureau and length of service. The Patrol Bureau has the most incidents regardless of cohort.

Incident_By_YearOfServ_Cohort_By_Bureau

Cohort	Range								Grand Total
	1. 0-3	2. 3-6	3. 6-9	4. 9-12	5. 12-15	6. 15-18	7. 18-21	8. 21+	
Admin	1.00	6.00	6.00	2.00	2.00	1.00		2.00	20.00
BOPC	1.00	3.00	1.00	3.00	2.00	1.00	1.00	3.00	15.00
Exec Serv	26.00	18.00	23.00	15.00	13.00	9.00	9.00	14.00	127.00
Inves	2.00	10.00	19.00	24.00	21.00	26.00	7.00	14.00	123.00
Patrol	145.00	253.00	157.00	120.00	87.00	63.00	40.00	71.00	936.00
PD & R	40.00	8.00	3.00	3.00	7.00	4.00	5.00	5.00	75.00
Grand Total	215.00	298.00	209.00	167.00	132.00	104.00	62.00	109.00	1,296.00

The following table displays the aggregate totals for fiscal years 2009 through 2013 by service and years of service cohorts. This information reveals that for the "0-3" cohort, "injured during arrest" is the most common activity that results in an injury. However, for the "21+" cohort, "other" is the most common activity that results in an injury.

Incident By Time On, Bureau and Service

Service	Range								Grand Total
	1. 0-3	2. 3-6	3. 6-9	4. 9-12	5. 12-15	6. 15-18	7. 18-21	8. 21+	
INJURED DURING ARREST	43.00	80.00	44.00	45.00	26.00	18.00	14.00	15.00	285.00
VEHICULAR ACCIDENT	27.00	42.00	30.00	25.00	27.00	19.00	7.00	17.00	194.00
OTHER	30.00	30.00	28.00	21.00	17.00	15.00	10.00	23.00	174.00
SLIP AND FALL	13.00	29.00	25.00	15.00	18.00	8.00	2.00	14.00	124.00
FOOT CHASE	26.00	35.00	20.00	13.00	5.00	2.00	3.00	5.00	109.00
ASSAULT	15.00	26.00	10.00	10.00	11.00	12.00	3.00	7.00	94.00
Physical Training/Defensive Tactics	34.00	14.00	11.00	8.00	9.00	9.00	5.00	3.00	93.00
LIFTING INJURY	2.00	5.00	9.00	6.00	2.00	9.00	5.00	6.00	44.00
SLIP AND FALL - WEATHER RELATED	5.00	10.00	6.00	7.00	3.00	2.00	4.00	6.00	43.00
Injury caused by sharp object	9.00	9.00	6.00	5.00	4.00	5.00	2.00	2.00	42.00
Exposure to toxic substance	4.00	3.00	5.00	5.00	2.00		1.00		20.00
Dog Bite		4.00	2.00	4.00	3.00		2.00	2.00	17.00
FIREARMS TRAINING		1.00	4.00	1.00	1.00	1.00	1.00	6.00	15.00
POISON IVY	5.00	3.00	2.00	1.00		2.00	1.00		14.00
REPETITIVE MOTION		4.00	1.00		2.00	1.00	1.00	2.00	11.00
Foreign object in eye	2.00	1.00	3.00			1.00		1.00	8.00
Injury caused by uneven surface			2.00	1.00	2.00				5.00
BIKE PATROL		2.00	1.00				1.00		4.00
Grand Total	215.00	298.00	209.00	167.00	132.00	104.00	62.00	109.00	1,296.00

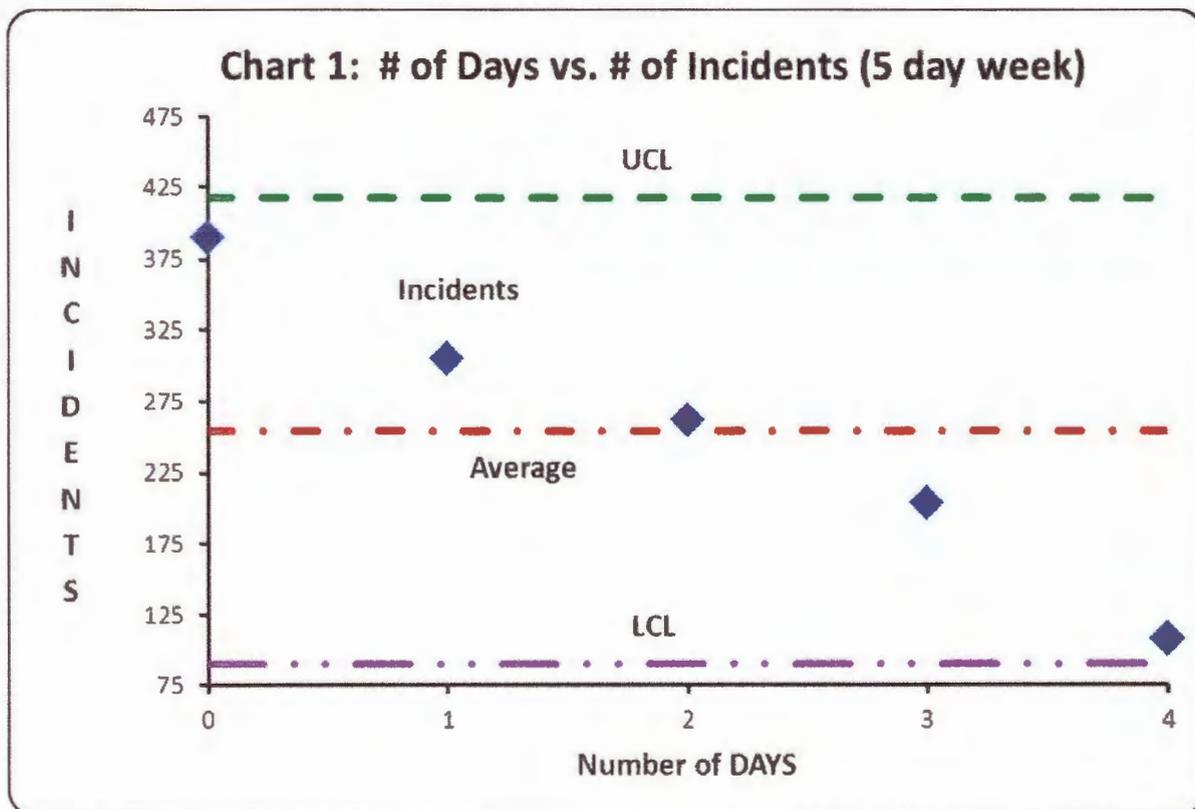
Days Between Incident and Last Day Off

This table displays the amount of days between time off for an employee and the day the reported incident occurred. A 24 hour, 365 day a year police schedule does not lend itself well to deduce potential fraud by simply looking at “Monday” as the first day of an employee’s work week. Many department employees have rotating days off. Therefore, data that displays the incident date compared to the employees last day off work, regardless of the actual day of the week, would be more accurate. The table below displays the number of elapsed days between an incident date and the employee’s last day off work. That day off work could be a regular day off, sick day, vacation day, etc. For example, the “0” in “#OfDays” category indicates that there were 0 elapsed days between the last day off work and the date of the incident. Therefore, assuming an employee was off on a Tuesday and was back to work on Wednesday, there have been zero elapsed days between these dates.

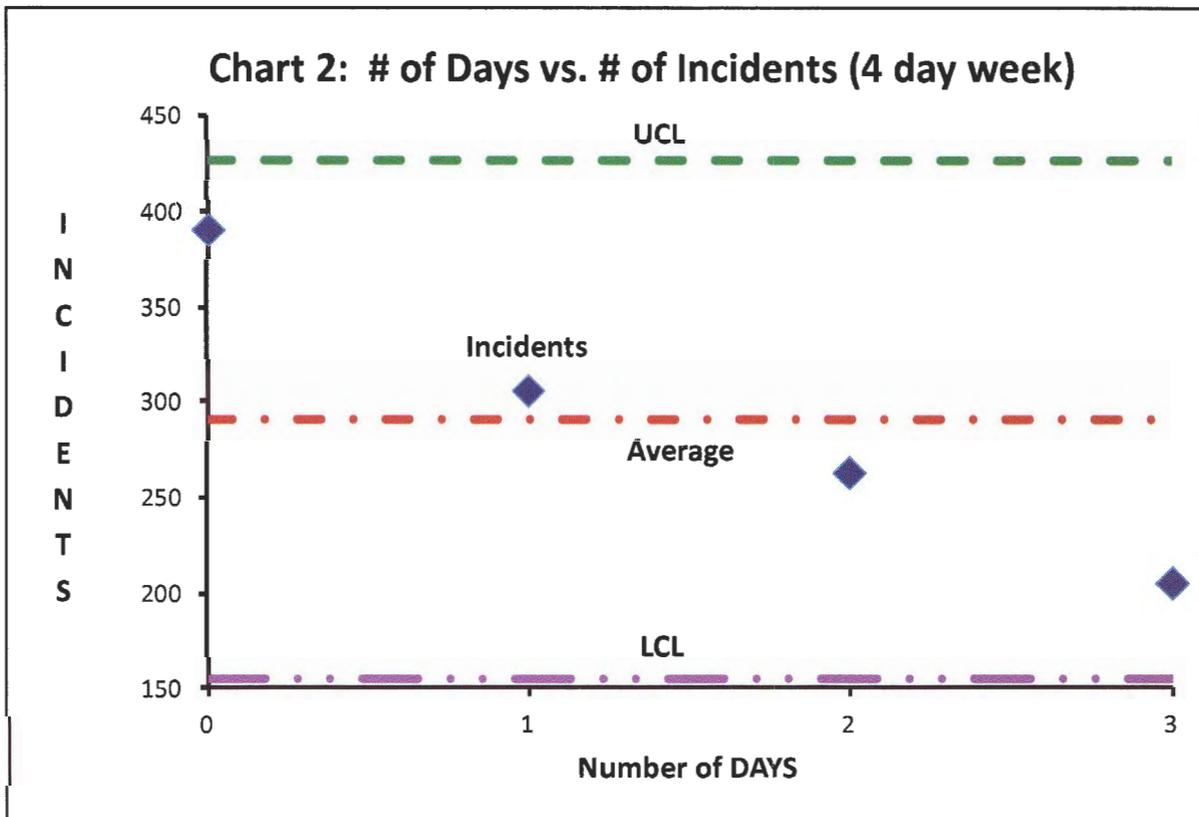
The majority of police officers are assigned to the Patrol Bureau where they experience the highest frequency of injuries. These officers are also on the 10-4 plan wherein they work 2 weeks of 4 days on and then 4 weeks of 5 days on. All work at least 4 days every week. This is likely why 89.6% of the injury incidents occur over the first four days back with only 8.2 occurring on the 5th day of work since 1/3 of the time officers will not work the 5th day and thus decrease their chances of injury.

#OfDays		# Incidents
0	+ -	390
1	+ -	305
2	+ -	262
3	+ -	204
4	+ -	108
5	+ -	18
6	+ -	3
7	+ -	4
9	+ -	1
10	+ -	1
Grand Total	+ -	1296

Does this distribution indicate significant variation between the days? In other words do the 390 incidents on the first day back represent a statistically significant variation from the amounts for the other 4 days? The two control charts shown below indicate that while there is variation there is no statistically significant variation between the days and the frequency of injuries per day. It is likely that the variation shown is random in nature. The chart below indicates the distribution of incidents remained within the upper and lower control limits when the 5th day of work is included indicating random variation.



The next chart indicates the distribution of incidents remained within the upper and lower control limits when the 5th day of work is not included also indicating random variation. While the 390 incident data point (which represents the first day back) is greater than the others, it is not statistically significantly larger than the other frequencies. It is concluded that there is no convincing indication that employees are involved in worker's compensation fraud by reporting off duty injuries as on duty injuries on the first day back.



The following Table displays the aggregate total for fiscal years 2009 through 2013 broken down by service and bureau. This information reveals the most common activity that resulted in an injury by bureau. The most common activity resulting in an injury in the Patrol Bureau was “injured during arrest”. However, in the Executive Services Bureau, the most common activity resulting in an injury was “other”.

	bureauName ▾						
	Admin + -	BOPC + -	Exec Serv + -	Inves + -	Patrol + -	PD & R + -	Grand Total + -
Service ▾	Sum of CNT	Sum of CNT	Sum of CNT	Sum of CNT	Sum of CNT	Sum of CNT	Sum of CNT
INJURED DURING ARREST			13.00	27.00	244.00	1.00	285.00
VEHICULAR ACCIDENT		2.00	1.00	21.00	167.00	3.00	194.00
OTHER	4.00	3.00	46.00	18.00	92.00	11.00	174.00
SLIP AND FALL	5.00	2.00	19.00	12.00	82.00	4.00	124.00
FOOT CHASE				4.00	104.00	1.00	109.00
ASSAULT		1.00	9.00	9.00	74.00	1.00	94.00
Physical Training/Defensive Tactics		4.00	1.00	11.00	37.00	40.00	93.00
LIFTING INJURY	1.00		12.00	2.00	25.00	4.00	44.00
SLIP AND FALL - WEATHER RELATED	5.00	1.00	8.00	1.00	28.00		43.00
Injury caused by sharp object	1.00		9.00	7.00	24.00	1.00	42.00
Exposure to toxic substance	1.00		4.00	5.00	10.00		20.00
Dog Bite				1.00	16.00		17.00
FIREARMS TRAINING		1.00		1.00	10.00	3.00	15.00
POISON IVY			1.00	1.00	8.00	4.00	14.00
REPETITIVE MOTION	3.00	1.00	1.00	3.00	2.00	1.00	11.00
Foreign object in eye			2.00		5.00	1.00	8.00
Injury caused by uneven surface			1.00		4.00		5.00
BIKE PATROL					4.00		4.00
Grand Total	20.00	15.00	127.00	123.00	936.00	75.00	1,296.00

The following table displays the total number of injury descriptions listed by year. The grand total may be more than the total number of incidents because an incident may have multiple injury descriptions. The information reveals that contusion was the most common type of injury experienced by members involved in a workers' compensation incident.

InjuryDesc	FiscalYear					
	2009	2010	2011	2012	2013	Grand Total
	#	#	#	#	#	#
Contusion	85	65	58	51	49	308
Sprain	59	49	62	65	68	303
Strain	55	55	44	54	79	287
Laceration	33	23	18	23	32	129
Puncture	16	10	19	12	18	75
Fracture	14	14	11	7	11	57
Foreign Body	3	8	8	6	5	30
Dermatitis	7	4	6	4	6	27
Respiratory Disorders	1	4	7	4		16
All Other	6	1		1	6	14
Concussion	3	1		2	5	11
Carpal Tunnel Syndrome	2	3	1	1	4	11
Poisoning/Chemical	1		1	3	3	8
Hearing Loss	1		3	3	1	8
Inflammation	1		2	1	3	7
Dislocation	3			1	2	6
Dizziness	2	1	2	1		6
Multiple Physical Injuries	1	1	1			3
Heat Prostration				2	1	3
Mental Stress		1			2	3
No Physical Injury					2	2
Infection					2	2
Rupture	1				1	2
Other Occupational diseases	1		1			2
Poisoning		1				1
Severance	1					1
Mental Disorders	1					1
Dust Disease NOC					1	1
Burn		1				1
Amputation	1					1
All Other Cumulative Injuries				1		1
Grand Total	298	242	244	242	301	1327

The following table displays the aggregate total for fiscal years 2009 through 2013 by the top 5 injury descriptions and the type of activity that caused the injury. The information reveals that a “contusion” was the most common injury experienced by members involved in an “injured during arrest” workers’ compensation incident. However, in a slip and fall incident, a “sprain” is the most common injury description

Service	InjuryDesc						Grand Total
	Strain	Sprain	Puncture	Laceration	Contusion		
	+ -	+ -	+ -	+ -	+ -	+ -	
	Sum of Count						
INJURED DURING ARREST	50	61	23	37	72	243	
VEHICULAR ACCIDENT	66	57		4	58	185	
OTHER	23	19	16	23	39	120	
SLIP AND FALL	23	53		10	32	118	
FOOT CHASE	32	33	8	12	23	108	
Physical Training/Defensive Tactics	48	26	1	2	10	87	
ASSAULT	9	19		10	44	82	
Injury caused by sharp object			13	24	5	42	
LIFTING INJURY	24	12	1	1	4	42	
SLIP AND FALL - WEATHER RELATED	7	17		2	11	37	
Dog Bite			12	2	3	17	
FIREARMS TRAINING	3		1	2	4	10	
Injury caused by uneven surface	2	3				5	
BIKE PATROL		3			1	4	
Exposure to toxic substance					1	1	
POISON IVY					1	1	
Grand Total	287	303	75	129	308	1102	

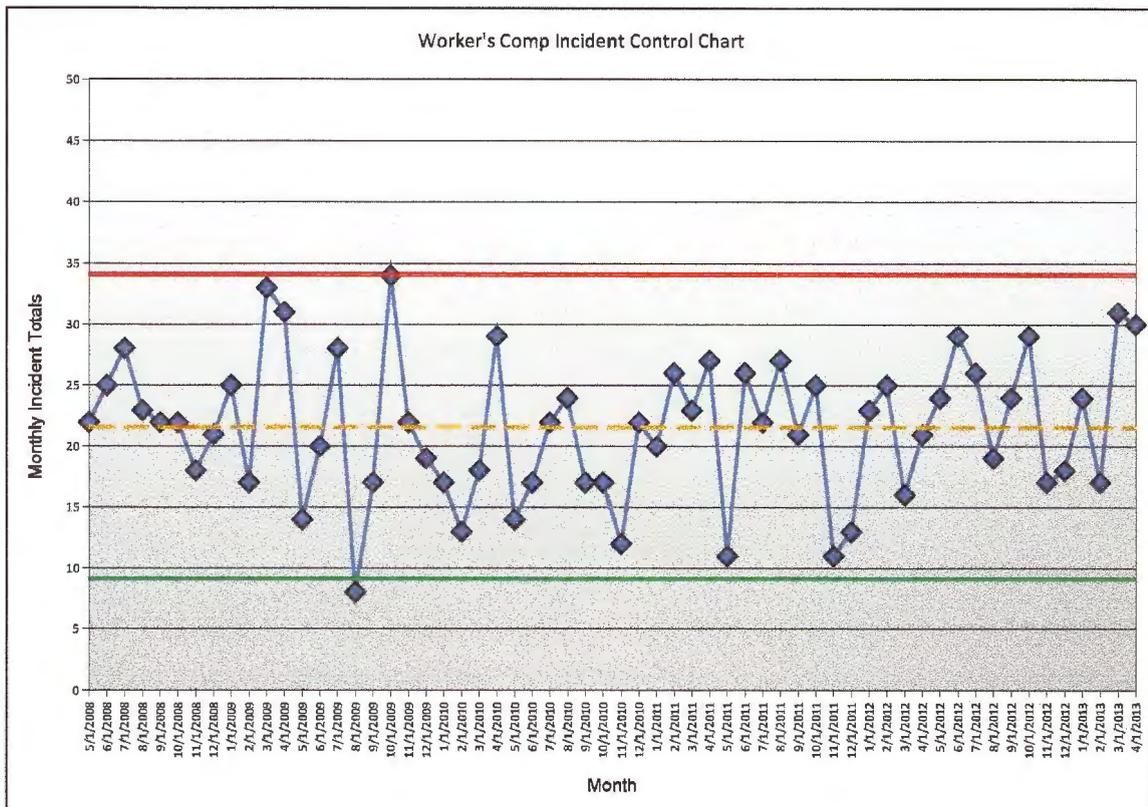
The following table displays the same type of information as above, however in reverse order. The top 4 activities are displayed along with the total number of injury descriptions. The information reveals that experiencing a strain is the most common type of injury that occurs during a vehicular accident.

		Service ▾				
		INJURED DURING ARREST	VEHICULAR ACCIDENT	OTHER	SLIP AND FALL	Grand Total
InjuryDesc	Sum of Count	Sum of Count	Sum of Count	Sum of Count	Sum of Count	Sum of Count
Contusion	72	58		39	32	201
Sprain	61	57		19	53	190
Strain	50	66		23	23	162
Laceration	37	4		23	10	74
Puncture	23			16		39
Fracture	18	8		2	8	36
Dermatitis	2			12		14
Foreign Body	3			10		13
Respiratory Dis	3			7		10
All Other	6	1		3		10
Dislocation	3	1			2	6
Concussion	1	5				6
Inflammation				5		5
Hearing Loss	3			2		5
Dizziness	2			2		4
Multiple Physic		3				3
Heat Prostratic				3		3
Mental Stress				2		2
Infection				2		2
Mental Disorde	1					1
Severance	1					1
Rupture					1	1
Poisoning/Cher				1		1
Poisoning	1					1
Other Occpatio	1					1
Burn				1		1
Amputation				1		1
All Other Cumu				1		1
Grand Total	288	203		174	129	794

Incident Control Chart

Incident control chart displays the total number of incidents by month over the listed period of time. The chart is provided to give a contextual reference point for comparing monthly totals to one another. Certainly, some variation in the process from month to month is to be expected. However, how much variation is too much? The upper and lower control limits, the solid top and solid bottom line respectively, provide an answer to that question. If a point would fall outside these limits it indicates that there is an assignable cause and not the result of random variation in the process. The control chart can be seen as part of an objective and disciplined approach that enables correct decisions regarding control of the process, including whether or not to change process control parameters.

Report Date Range: 5/1/2008 - 4/30/2013



As can be seen in the above control chart, August 2009 falls just below the lower control limit. Also, October of 2009 is right at the upper control limit. Once an outlier is identified, the next step would be to perform a root-cause analysis to determine exactly why that month produced an unexpected total. However, that type of analysis is beyond the scope of this audit.

This report has been prepared and submitted for your review and approval.



P.O. Christopher Kincaid
Internal Audit Unit