POLICE COMMITTEE
AGENDA
January 5, 2012
6:00 P.M.
City Council Chambers
1702 Plainfield Road

1. Call to Order

2. Public Comment and Communications

3. Approval of December Meeting Minutes

4. Workload Analysis Review

5. Department Report
    a. Overview of Monthly Activity

6. Next Meeting Date-Thursday, February 2, 2012, 6:00 p.m.

7. Adjournment

POLICE COMMITTEE
MEETING MINUTES
December 1, 2011

1. **Call to Order**
   Chairman McIvor called the meeting to order at 6:00 p.m. in the Council Chambers of the Darien City Hall.
   Committee members in attendance: Chairman McIvor, Alderman Poteraske and Alderman Joerg Seifert
   Others in attendance: Chief Brown, Deputy Chief John Cooper, Treasurer, Michael Coren, Administrator Vana

2. **Public Comment and Communications**
   There were no public comment or communications presented.

3. **Minutes**
   Alderman Seifert made a motion to approve the minutes of the September 1, 2011 Police Committee meeting; Alderman Poteraske seconded the motion. Motion approved by a voice vote of 3 ayes.

4. **Goal Setting Power Point Presentation**
   Chief Brown provided a review of the power point presentation from the November 21st Council meeting and answered various questions from the committee.

5. **Vehicle Replacement Update**
   Deputy Chief Cooper provided an update on the vehicle replacement and advised we are on budget with the project.

6. **Department Report**
   The staff provided an overview of the departmental monthly activity and the overtime expenses related to this year's Darien Fest.

7. **Next Meeting Date**
   Chairman McIvor announced that the next Committee meeting will be on Thursday, January 5, 2012, 6:00 p.m. in the City Council Chambers.

8. **Adjournment**
   The Committee Meeting was adjourned at 7:00 p.m., motion by Alderman Poteraske, second by Alderman Seifert; motion carried by voice vote of three ayes.

Approved: _____ Alderman: _____
Date Joerg Seifert

Chairman: _____ Alderman: _____
Sylvia McIvor John Poteraske

CITY OF DARIEN
M E M O

TO: **Police Committee Members**
FROM: **Bryon D. Vana, City Administrator**
DATE: **December 28th, 2011**
SUBJECT: **January 5th Committee Meeting – Workload Analysis**

Attached is a draft workload analysis completed by Chief Brown. The Chief will review this information with the committee at the January 5th committee meeting. The purpose of the workload analysis is to determine the following:

- how much work the officers are engaged in
- in what categories
- what percentage of the effort is self generated and what is the result of a call for service via 911.

The *International City Management Association Center for Public Safety Management* recommends conducting a Workload Analysis as a means to reduce costs and improve performance of your public safety services. An analysis of police workload, including citizen- and officer-initiated activities, allows communities to show how actual workload compares to deployment, providing objective data on staffing and scheduling requirements.

The National Criminal Justice Reference Service (NCJRS), administered by the US Department of Justice, also recognized the importance of conducting workload analysis. The NCJRS writes:
Police staffing has historically been a touchy subject involving tension between citizens who want more police on the street and policy makers who determine police budgets. In order to arrive at the minimum number of patrol officers needed for each police shift, it is important to conduct a detailed analysis based on historical calls for service data. A comparative staffing analysis begins with data collection, which involves the number of calls for service received during the study period or within the geographic region, depending on the scope of the analysis. The call data should be categorized as emergency, urgent, or routine/non-urgent and should be sorted by day of the week and by time of the call. Next, the analysis requires determining the average time spent by officers on each of the call types, which is regarded as one of the most difficult aspects of a staffing analysis. Once the workload levels have been calculated and current staffing levels have been identified, police managers can compare staffing plans with the goal of finding the scheduling arrangement that best levels out the workload. Although time consuming, the comparative staffing analysis method offers a wealth of information that can be used to provide the best service possible to the community.

If you have questions prior to the meeting feel free to contact the Chief at 353-8351.

EXECUTIVE SUMMARY
WORKLOAD ANALYSIS

INTRODUCTION:

As economic considerations and the strain on budgets continue to grow, the manner in which tax dollars are spent by the governing bodies of the city will be continually challenged. City governors and police executives will no longer have many of the luxuries that have been traditionally taken for granted. The idea that "we've always done things this way" simply will no longer suffice. Instead we will be expected to quantify the allocation of resources and the number of resources that we need. In order to do so there must be a strategy in place. This document will frame the strategy for how we will measure the Darien Police Department and make the management decisions that will define where, when and how resources are allocated. Those decisions will, and must be based upon quantifiable data that is measured with the overall benefit to the public that we serve.

PURPOSE:

The purpose of the workload analysis is to determine how much work the officers are engaged in, in what categories, what percentage of the effort is self generated and what is the result of a call for service via 911. Additionally, the analysis seeks to determine how much of the officers manpower is spent on radio response and how much discretionary patrol time is available to officers. Discretionary time is important because it is the use of this time that allows officers to engage in pro-active activities that are likely to prevent crime rather than simply responding to it after the fact.

The workload analysis is the first step in determining how many officers a department needs in order to fulfill its mission, while meeting the many needs of the community. The goal is to lend a mathematical equation to the determination of how many police officers is necessary to provide service to the community and is likely the most prudent means of achieving a number that has integrity.

The initial analysis involves the month of October 2011. The date range is the entire month (31 days) from 01 October -31 October 2011. Subsequent analysis periods will involve a minimum of two other non consecutive months in order to get an accurate picture and identify any trends related to seasonal climate shifts. In order to make this discussion meaningful we will discuss/define some of the terminology we will use, then explain the origin of the data and finally explain how the data was analyzed.

DEFINITION(S):

EVENT- Whenever an officer initiates action whether it is a 911 call, self initiated activity or on-view summon by a citizen, the dispatch center creates an event. Each event is assigned an event number.

INCIDENT TYPE- Every event is also identified by an incident type and for tracking purposes is also assigned an event code. This designation is based largely on how the caller or officer identified the circumstances that warrant a police response. For example, a suspicious person is classified as just that.

CREATE TO CLOSE- Each event that is created is time stamped by the DU-COMM dispatcher. That time stamp remains open until the assigned unit notifies the dispatcher that the assignment is completed. The time stamp is then closed and that data allows us to

determine how much time was spent on that call from creation of the event until the conclusion of the assignment.

Most of the other terms that will be used, such as time of day, day of week etc. are self explanatory.

DATA ORIGIN:

Commencing in May 2011, the Darien Police Department migrated from a self contained dispatch center to a regional dispatch center known as DU-COMM. The information contained herein is derived from the CAD system (computer aided dispatch). The information converted from the CAD format by a software application in DU-COMM. The software is called hummingbird and the data is then transferred to an Excel spreadsheet. The data in the Excel spreadsheet is analyzed and placed in an easy to understand format by the use of "Pivot tables". The Pivot Table allows the data to be viewed in several different ways in order to facilitate the analysis. After it is placed in the tables some calculations are still conducted manually.

Table#1, Police Officers Only:

TIME ANALYSIS:

Officer	Create to Close in Minutes	Create to close in hours	Percentage of monthly total
Zimny	1554.15	25.9	18%
Yeo	5582	93.0	65%
Stutte	2751	45.85	32%
Stock	760.27	12.67	8%

Skeweres	3815.99	63.15	44%
Simek	1485.36	24.7	17.2%
Rummick	6619.49	110.27	77%
Norton	390.81	6.5	4.5%
Murphy	1284.18	24.7	17.3%
Milazzo	3978.98	66.3	46.3%
Lorek	3427.27	57.0	39.8%
Liss	2258.08	37.6	26%
Koseniak	1670.83	27	18.8%
Keough	2557.19	42	29%
Jump	921.76	15.36	10.6%
Hruby	2708.78	45.14	31.5%
Hellman	785	13.0	9%
Greenaberg	3296.78	54.9	38%
Glomb	842	15.7	10.9%
Bischoff	1068.18	17.8	12.4%

N=20 officers

Mean/Average=39.9 hours per officer =27% of time engaging I directed activity

Median= 27 hours

Mode= 24.7 hours

There were 1812 events/event numbers recorded

There were 175 call or event categories catalogued

A total of 55,940.24 minutes expended on events

Included in that activity figure is 3,583.42 minutes or 59.7 hours completed by sergeants

A total of 932.33 hours expended on events in total

A total of 798.5 hours expended by the 20 officers referenced.

These figures indicate that officers spend 27.9% of on-duty time engaged in radio or self initiated activity.

** That means that 71.6% of on duty time could be directed toward training, and pro-active policing activity

143 possible regular work hours per month [based upon a 7.15 hour work day and 20 days per month worked per officer]

2,860 possible hours per month for the 20 officers based upon a 20 day work month*

* It should be noted that overtime is not considered for this calculation

These figures would also be different if the officers who were not working during that time were actually on the schedule, i.e. sick, comp time, vacations etc.

DAY OF WEEK ANALYSIS:

The next calculation related to the analysis is determining the busiest day of the week. Using the same data set and a pivot table, the days of the week were examined. The program provided a numerical designation for each day of the week with Sunday being

(1) and Saturday being (7). The table below reveals what the analysis yielded. This table was created by identifying the number of events obtained during the evaluated month.

Day of Week numerical	Day of week	Number of events obtained	Percentage
1	Sunday	301	16.6%
2	Monday	271	14.95%
3	Tuesday	204	11.2%
4	Wednesday	219	12.8%
5	Thursday	183	10%
6	Friday	274	15.1%
7	Saturday	360	19.8%

The merit in such an analysis is that it creates a factual basis for how, when and why we should schedule personnel in a certain manner. Surely, some of these decisions have been traditionally based upon management's prior knowledge or historical imperatives, or gut intuition. The table above clearly shows that Friday, Saturday and Sunday are the busiest times of the week and that Tuesday through Thursday are considerably less busy during the month of October This is certainly no secret to most law enforcement practitioners, but provides supportive evidence for what we know empirically.

TIME OF DAY ANALYSIS:

In terms of determining how to allocate resources, understanding what times of day are most busy is critical. This is important, not only for determining the number of officers per shift, but also in determining the starting times for the shift, whether they should be staggered with a "power shift" or if everyone should start at the same time. The next table will examine the same 1,812 events generated, but seek to identify what time of the day they are occurring in. This data, in the interest of total analysis will be viewed in four hour increments.

Time Of day	Events	Percentage
2400/MID	***146***	***8%***
0100/AM	100	**5%**
0200/AM	40	**2%**
0300/AM	34	**1.8%**
0400/AM	20	**1.1%**
0500/AM	12	**.6%**
0600/AM	25	**1.3%**

0700/AM	50	**2.7%**
0800/AM	82	**4.5%**
0900/AM	63	**3.4%**
1000/AM	57	**3.1%**
1100/AM	68	**3.7%**
1200/NOON	70	**3.8%**
1300/1:00	61	**3.3%**
1400/2:00	63	**3.4%**
1500/3:00	71	**3.9%**
1600/4:00	83	**4.5%**
1700/5:00	92	**5.0%**
1800/6:00	95	**5.2%**
19007:/00	98	**5.4%**
2000/8:00	97	**5.3%**
2100/9:00	148	**8.1%**
2200/10:00	120	**6.6%**
2300/11:00	117	**6.4%**

TIME OF DAY ANALYSIS BASED UPON 4 HOUR INCREMENTS:

9:00/pm-12:00/am	1:00/am-4:00/am	5:00/am-8:00/am	9:00/am-12:00/pm	1:00/pm-4:00/pm	5:00/pm-8:00/pm
531	194	169	258	278	382
29.3%	**10.7%**	**9.3%**	**14.2%**	**15.34%**	**21%**

As you can see, when viewed individually there is not much significance to the analysis, but when the data is examined in four hour increments, it provides a wealth of information as to how resources should be allocated. In looking at the eight hours between 0100 and 0800, only 20% of the activity is created during that time period. Conversely, 36.3% of activity is occurring during the eight (8) hour period between 1300 and 2000 hours. When the time frame is expanded out to the twelve hour point, 65.6% of all activity is created during the time frame from 1300 and 0001 hours. This data begs answers to questions such as; could we reduce the staffing for overnight on the midnight shift and have two power cars that operated between 1800-0230. Does that make more management sense than having eight officers on a shift where the activity doesn't support it. Finally, by shifting hours, could we save significantly on overtime? The data gleaned here will need to be measured against several months of data in order to be meaningful. This analysis does not define those answers, but as a result of viewing the aggregate data it will provide a plan of action

ASSIGNMENT RECEIVED ANALYSIS:

Another component of the workload analysis is an analysis of how calls are received. Based upon that data we can determine which officers and how they are utilizing their

time. For the sake of this discussion, we will only deal with percentages and not seek to assess individual officers.

	SOURCE	911	FIELD INITIATION	MDT	UNK*
Raw numerical		187	527	287	811
Percentage		10.3%	29%	15.8%	44.75%*
Aggregate		998/55.0%		814/44.9%	

In speaking with Scott Klein in DU-COMM under the title source (source of the call) a numerical code is applied to these two categories by DU-COMM. The codes are 01-and 03. Scott assured me that both codes actually are 911 or citizen generated calls as opposed to officer generated. Based upon this information and related data, 55% of all police activity for October 2011, is call generated, while nearly 45% is self-generated by the officer. In order to make these figures a little clearer and more meaningful, let's take a closer look.

Source Code	***Source Text***	***Incid Count***	***Minutes***	***Hours***	***Category***
0	Unknown	811	26,501.39	441.8	
1	911	187	6,637.63	110.6	33,139.02
2	MDT	287	2,672.34	44.5	
3	Field	527	20,128.88	335.4	22,801.22
TOTALS		1,812	55,940.24	932.33	

The first table examines the relationship between the number of events generated by a call from a citizen and contrasts that to the events that are generated as a result of the officer self-initiating some activity. In that table we see that 55% of the 1,812 events created are based upon a call from a citizen. The 44.9% of events generated as the result of the officer initiating some activity is also measured against the 1,812 total events created for the month of October.

The table above seeks to show the number of hours that each category of event type was required of the officer. As you can see, the table above shows that category codes "0" and "1" accounted for 33,139.02 minutes or 552.4 hours. This number indicates that 59.2% of the 932 total hours expended on dispatched events was based upon a 911 event. However, that number also serves to indicate that of the 2,860 hours actually worked by the officers, 19.5% was spent engaged in responding to dispatched events. Further, the table indicates that the 44.9% of events that the officers initiated represents 22,801.22 minutes or 379.9 hours. These numbers indicate that nearly 41% of the 932 hours expended responding to events was expended on activity/events that the officers themselves generated. Again, those figures also indicate that the 379.9 hours expended in self-initiated activity represents approximately 13.2% of the 2,860 hours worked by the 20 officers referenced.

When taken in tandem it indicates that 32.7% of the officer's time was spent addressing events. The traditional model for a community policing environment is having a dispatch rate of approximately 33-35%. That means that of all calls received that only 33-35% are

dispatched. In a community policing environment this is ideal because it allows the officers a large amount of discretionary time that can be used for proactive policing, crime prevention and community engagement. Based upon the figures with 19% of 2860 total hours available we can see that there is likely to be considerable discretionary time to allow our officers to engage in discretionary activities.

It should be clear that these results do not indicate that there is too much down time or that we have too many officers. What should be clear is that with that level of discretionary time that there is considerable latitude to maximize the department's efficiency and enhance our crime fighting and crime prevention capability, while fully engaging the community at a multitude of levels.

We should keep in mind that these figures don't take into consideration the members who are assigned to detective duties which are the subject of a separate analysis. Additionally, what we should keep in mind is that these figures only represent one month of analysis (October). In order to validate these findings, it is critical that the analysis be viewed over a period of weeks and also viewed in terms of the mission, goals and objectives of the Department.

CALL TYPE ANALYSIS:

The final phase of the analysis will involve a cursory look at what type of calls the officers are expending their time on. We will only examine a few in that some incident types are reflected in multiple categories. For example, there are seventeen (17)

categories of calls for service under the heading of traffic. In the interest of expediency I have grouped such categories together and developed and aggregate number for the group.

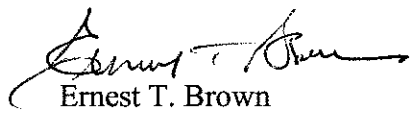
	Traffic	Burgl.	Domestic	Thefts	Drugs	Parking	Self *	Assist
Minutes	6739.81	1069.16	1596.43	899.14	110.6	638.0	3,103.15	4486.
Hours	112.3	17.8	26.6	14.9	1.8	10.6	51.7	74.7
% of total	12%	1.9%	2.8%	1.6%	.1%	1.1%	5.5%	8%

Two factors are of importance, these are not all of the Calls For Service that were handled, but simply a random sampling that is reflective of the overall. The other factor to bear in mind is that this is only for one month. The final factor for consideration is that there were no categories that individually had an aggregate minute/hour count that matched these with the exception of calls that were cleared and the officer failed to give a completion code or was not heard by the DU-COMM dispatcher. This will be handled administratively. It should be further noted that the department had previously experienced technical difficulties with DU-COMM, we anticipate that they have largely been corrected but are still being resolved and this may be the cause for that glitch. What is infinitely clear is that traffic issues and Assists to other agencies accounted for 20% of activity in October 2011.That number is closely followed by the officer's self-initiated activity. What is also clear is that this level of analysis will require us to examine how we schedule training, how we grant the use of compensatory time and what we have traditionally deemed as appropriate staffing levels. That does not suggest, by any means

the need for a reduction in staffing, but will likely alert us to the fact that we can more wisely utilize the staff that we have for crime prevention rather than crime response. Such an efficient use of manpower will guarantee a level of readiness by the Darien Police Department and deter the criminal element from entering Darien in order to engage in criminal conducts.

SUMMARY:

It is my hope that this report provides a glimpse at the importance of a workload analysis. I believe that in doing so it will make the management of the Darien Police Department easier and make a great deal more sense from an economic standpoint, resource allocation standpoint and from the standpoint of identifying a service delivery model. As you can see, using this strategy will not only determine how we will allocate manpower, but how we will deploy it to ensure that Darien remains a safe place to live and work.
I will follow up on this analysis by next looking at May or June which were the first full months that Darien migrated to DU-COMM, followed by a summer month, likely July and then complete the analysis by assessing the entire DU-COMM period from May until December 31 2011. Should the subsequent analysis remain consistent with this one, it will likely spawn some necessary operational changes. All of the raw data used to create this document is available for review.



Ernest T. Brown

Chief, Darien Police Department