CITY COUNCIL AGENDA ITEM

Date: March 26, 2012

To: John Szerlag, City Manager

From: William S. Nelson, Fire Chief

Subject: Fire Department 2011 Annual Report

I am pleased to submit the fire department activity report for 2011. The report provides details on response and support activity for 2011, and provides comparison data from the previous year. The following are notable changes in activity in 2011:

- Overall responses increased by 10.77% to 1090 incidents
- Non-fire incidents increased by 13.51% with the largest increases in rescue/extrication (154.17%); service calls (104.76%); and hazardous conditions (10.32%)
- Cooking continues to be the most frequent cause of structure fires (26.15%)
- There were no deaths from fire, 3 civilian injuries, and no fire fighter injuries.
- Fire loss estimates decreased significantly from the previous year.
- Due to reorganization and realignment of responsibilities within the career staff, the department has been able to provide a modest increase in total activities and activity hours with fewer personnel.
- Volunteer firefighter staffing has remained fairly constant while career staffing has decreased 21% over the past 5 years.

If you have any questions, please contact me.

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Category	Count	Percent of Total Incidents	Previous Year	Change
Total Fire Incidents	166	15.23%	170	-2.35%
Total Non Fire Incidents	924	84.77%	814	13.51%
Total Incidents	**1090**	**100.00%**	**984**	**10.77%**

Fire Incidents	Count	Percent of Total Fires	Previous Year	Change
Structure Fires	65	39.16%	68	-4.41%
Vehicle Fires	48	28.92%	51	-5.88%
Grass Fires	21	12.65%	16	31.25%
Refuse Fires	20	12.05%	25	-20.00%
Outside Fires	8	4.82%	4	100.00%
Other Fires	4	2.41%	10	-60.00%
Total Fire Incidents	**166**	**100.00%**	**174**	**-4.60%**

Non Fire Incidents	Count	Percent of Total Non Fires	Previous Year	Change
Overpressure/Rupture	1	0.11%	2	-50.00%
Accident/Removal/Rescue	61	6.60%	24	154.17%
Hazardous Conditions *	171	18.51%	155	10.32%
Service Call	43	4.65%	21	104.76%
Good Intent **	171	18.51%	170	0.59%
Cent. Sta./Malicious False Alarm	11	1.19%	5	120.00%
Alarm System Malfunction	175	18.94%	171	2.34%
Alarm Activation Unintentional	282	30.52%	257	9.73%
Weather Standby	7	0.76%	8	-12.50%
Other Non Fire	2	0.22%	1	100.00%
Total Non Fire Incidents	**924**	**100.00%**	**814**	**13.51%**

** Includes spills or leaks with no fire; excess heat; arcing wires; and chemical emergencies*

*** Includes smoke scares; wrong locations; steam mistaken for smoke; and controlled burning*

Data obtained from Oakland County Fire Records management System unless indicated otehrwise.

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Structure Fires by Occupancy	Count	Percent of Structure Fires	Previous Year	Change
Public Assembly	3	4.62%	1	200.00%
Educational	0	0.00%	0	0.00%
Institutional	0	0.00%	2	-100.00%
Single Family Dwelling	27	41.54%	37	-27.03%
Apartments	13	20.00%	15	-13.33%
Motel/Hotel	2	3.08%	0	200.00%
Stores/Sales	6	9.23%	1	500.00%
Office	5	7.69%	2	150.00%
Industrial	6	9.23%	3	100.00%
Storage	2	3.08%	1	100.00%
Other	1	1.54%	6	-83.33%
Total Occupancies	**65**	**100.00%**	**68**	

Structure Fire Causes*	Count	Percent of Structure Fires	Previous Year	Change
Intentional	3	4.62%	4	-25.00%
Children Playing	0	0.00%	1	-100.00%
Smoking	4	6.15%	1	300.00%
Heating	3	4.62%	3	0.00%
Cooking	17	26.15%	14	21.43%
Electrical Distribution	3	4.62%	2	50.00%
Appliances	5	7.69%	4	25.00%
Other Heat, Flame, Spark	1	1.54%	7	-85.71%
Other Equipment	2	3.08%	3	-33.33%
Natural	4	6.15%	1	300.00%
Exposure	1	1.54%	0	100.00%
Undetermined	12	18.46%	28	-57.14%
Under Investigation	10	15.38%	0	1000.00%
Total Causes	**65**	**100.00%**	**68**	

** Data obtained from National Fire Incident Reporting System records*

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Total Casualties	Number	Percent	Previous Year	Change
Civilian Injury	3	100.00%	3	0.00%
Civilian Death	0	0.00%	0	0.00%
Firefighter Injury	0	0.00%	13	-1300.00%
Firefighter Death	0	0.00%	0	0.00%
Total Casualties	**3**	**100.00%**	**16**	**-1300.00%**

Total Estimated Fire Loss	Amount	Percent	Previous Year	Change
Structure Value	$231,038,902.00	100.00%	$90,960,680.00	154.00%
Property Loss	$508,800.00	0.22%	$3,288,183.00	-84.53%
Contents Loss	$338,400.00	0.15%	$2,590,626.00	-86.94%
Total Loss	**$847,200.00**	**0.37%**	**$5,878,809.00**	**-85.59%**
Total Saved	**$230,191,702.00**	**99.63%**	**$85,081,871.00**	**170.55%**

Response Time Analysis **

Emergency Responses	Count	Cumulative Response	Percent	Cumulative Percent
0 - 1 Minute	3	3	0.57%	0.57%
1 - 2 Minutes	5	8	0.95%	1.52%
2 - 3 Minutes	20	28	3.79%	5.30%
3 - 4 Minutes	20	48	3.79%	9.09%
4 - 5 Minutes	72	120	13.64%	22.73%
5 - 6 Minutes	94	214	17.80%	40.53%
6 - 7 Minutes	73	287	13.83%	54.36%
7 - 8 Minutes	67	354	12.69%	67.05%
8 - 9 Minutes	59	413	11.17%	78.22%
9 - 10 Minutes	40	453	7.58%	85.80%
10 + Minutes	75	528	14.20%	100.00%
Total Emergency Responses	**528**		**48.44%**	**of total responses**
Total Responses	**1090**			

*** Response Time Analysis - Dispatch to Arrival - as recorded by the dispatch center*

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Activities	Count	Percent	Previous Year	Change
Fire Station Service Requests	817	52.37%	909	-10.12%
Fire Investigations	52	3.33%	37	40.54%
In-Service Training Provided	490	31.41%	473	3.59%
Specialty Team Training Provided	59	3.78%	50	18.00%
Fire Academy Training Provided	142	9.10%	93	52.69%
Subtotal	**1,560**	**100.00%**	**1,562**	**-0.13%**
Plans Reviewed	794	5.27%	693	14.57%
Permits Issued	448	2.97%	414	8.21%
Inspections	2,421	16.07%	2,412	0.37%
Violations Issued	1,424	9.45%	1,318	8.04%
Violations Cleared	689	4.57%	686	0.44%
Hydrant Flow Tests Conducted	20	0.13%	24	-16.67%
Public Education Programs	130	0.86%	155	-16.13%
Public Education Participants	7,801	51.78%	7,313	6.67%
HAPIS Computer Entries	637	4.23%	1,027	-37.97%
Alarms Registered	701	4.65%	632	10.92%
Subtotal	**15,065**	**100.00%**	**14,674**	**2.66%**
Total Activities	**16,625**		**16,236**	**2.40%**

Activity Hours	Count	Percent	Previous Year	Change
Administrative/Support *	3,283.15	11.62%	1,959.05	67.59%
Fire Prevention *	4,289.55	15.18%	3,271.85	31.10%
Operations **	20,691.00	73.21%	19,904.00	3.95%
Total Hours	**28,263.70**	**100.00%**	**25,134.90**	**12.45%**

** Career staff-hours only.*

*** Department man-hours. Includes volunteer & career staff training hours.*

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Staffing

Volunteer	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Total	Trend	Cumulative
2007	28	28	30	26	32	31	175	NA	0.00%
2008	29	30	29	24	31	32	175	0.00%	0.00%
2009	29	27	28	24	31	25	164	-6.71%	-6.71%
2010	29	27	29	32	30	26	173	5.20%	-1.51%
2011	29	27	28	31	29	24	168	-2.98%	-4.48%
5 Yr. Avg.	28.8	27.8	28.8	27.4	30.6	27.6	171.0	-0.90%	-2.54%
2 Yr. Avg.	29.0	27.0	28.5	31.5	29.5	25.0	170.5	1.11%	-2.99%

Career	Chief	Assistant Chief	Staff Lieutenant	Staff Technician	Secretary	Total	Trend	Cumulative
2007	1	2	9	1	1	14	NA	0.00%
2008 *	1	2	7	2	1	13	-7.69%	-7.69%
2009 **	1	2	6	2	1	12	-8.33%	-16.03%
2010	1	2	6	2	1	12	0.00%	-16.03%
2011 ***	1	1	5	2	1	10	-20.00%	-36.03%
5 Yr. Avg.	1.0	1.8	6.6	1.8	1.0	12.2	-7.21%	-15.15%
2 Yr. Avg.	1.0	1.5	5.5	2.0	1.0	11.0	-10.00%	-26.03%

** Two retirements. One replacement*

*** One death. No replacement.*

**** Two retirements. No replacement.*

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Station	Incident Category	Incident Count	Percent of Incidents	Pevious Year	Change
1	Fire	29	2.66%	33	-12.12%
	Rescue/Extrication	5	0.46%	5	0.00%
	False Alarm	78	7.16%	105	-25.71%
	All Other	58	5.32%	83	-30.12%
	Sub Total	**170**	**15.60%**	**226**	**-24.78%**
2	Fire	15	1.38%	10	50.00%
	Rescue/Extrication	7	0.64%	2	250.00%
	False Alarm	49	4.50%	37	32.43%
	All Other	43	3.94%	35	22.86%
	Sub Total	**114**	**10.46%**	**84**	**35.71%**
3	Fire	45	4.13%	44	2.27%
	Rescue/Extrication	13	1.19%	4	225.00%
	False Alarm	135	12.39%	139	-2.88%
	All Other	94	8.62%	81	16.05%
	Sub Total	**287**	**26.33%**	**268**	**7.09%**
4	Fire	46	4.22%	43	6.98%
	Rescue/Extrication	21	1.93%	10	110.00%
	False Alarm	106	9.72%	83	27.71%
	All Other	73	6.70%	72	1.39%
	Sub Total	**246**	**22.57%**	**208**	**18.27%**
5	Fire	11	1.01%	18	-38.89%
	Rescue/Extrication	5	0.46%	1	400.00%
	False Alarm	24	2.20%	22	9.09%
	All Other	25	2.29%	37	-32.43%
	Sub Total	**65**	**5.96%**	**78**	**-16.67%**
6	Fire	12	1.10%	14	-14.29%
	Rescue/Extrication	10	0.92%	2	400.00%
	False Alarm	42	3.85%	36	16.67%
	All Other	54	4.95%	35	54.29%
	Sub Total	**118**	**10.83%**	**87**	**35.63%**
8	Fire	7	0.64%	8	-12.50%
	Rescue/Extrication	0	0.00%	0	0.00%
	False Alarm	35	3.21%	10	250.00%
	All Other	48	4.40%	15	220.00%
	Sub Total	**90**	**8.26%**	**33**	**172.73%**
	Total	**1090**	**100.00%**	**984**	**10.77%**

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Supplemental

Valid Alarm Activations	Count	Percent of Total Incidents	Previous Year	Change
Cooking	20	1.83%	19	5.26%
Fire	7	0.64%	4	75.00%
Smoke	5	0.46%	3	66.67%
Overheat	2	0.18%	3	-33.33%
Electrical	3	0.28%	0	300.00%
Steam	1	0.09%	2	-50.00%
Total Valid Alarms	**38**	**3.49% of Total Incidents**	**31**	**22.58%**

False Alarm Activations	Count	Percent of Total Incidents	Previous Year	Change
Unintentional	282	25.87%	257	9.73%
Malfunction	175	16.06%	171	2.34%
Other	0	0.00%	5	-500.00%
Malicious	11	1.01%	0	1100.00%
Total False Alarms	**468**	**42.94% of Total Incidents**	**433**	**8.08%**

Structure Fires With Significant Loss	Date	Stations	Alarms	Estimated Loss*	Summary
1069 Byron	4/14/2011	6, 2	1	$155,000.00	Single Family Dwelling
555 Kirts	7/22/2011	3, 4, 1	2	$245,000.00	Apartment Building
1207 Alameda	10/15/2011	5, 2, 1, 4	2	$245,000.00	Apartment Building
4235 Cactus	11/19/2011	5, 1, 4	1	$162,000.00	Single Family Dwelling

**Replacement Cost of Real & Personal Property*

Mutual Aid	Date	Stations	Alarms	Type	Summary
1710 Hillwood, Bloomfield Hills	5/12/2011	3, 6	2	Provided	Single Family Dwelling
15417 Northgate, Oak Park	11/1/2011	3	2	Provided	Apartment Building

Accomplishments

The Troy Fire Department standardized its response to structure fires by adding Rescue 4 for Rapid Intervention Crew, and an air tender to each response.

The Troy Fire Department was awarded a $25,000 Assistance to Firefighter Grant for personnel accountability and RIC training to be implemented in 2012. This personnel accountability system will allow for better tracking of firefighters at an incident to help insure their safety & survival.