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## INTEROFFICE MEMORANDUM

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**TO:** MAYOR AND COUNCIL  
**FROM:** ROBERT S. HOFFMANN, BOROUGH ADMINISTRATOR  
**SUBJECT:** BOROUGH OF WESTWOOD SUSTAINABILITY UPDATE  
**DATE:** 7/29/2011  
**CC:** DENISE HOLMES, DEPUTY CLERK; KAREN HUGHES, BOROUGH CLERK

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**Energy Audit** – The Borough has been using its 2010 Energy Audit as the baseline for sustainability improvements. The Energy Audit was presented to the Governing Body in June of 2010. Please see memo dated January 31, 2011 titled “Borough of Westwood Sustainability Update 2010-2011”. (Attachment “A”)

**2011 Accomplishments:**

1. Energy Auction – In June the Borough participated in the NJSEM Energy Auction. Based on the auction, for the 51 participating municipalities in the PSE&G service area, the average dollar savings for kilowatts is estimated at \$6,736.32. This is a projected savings of 10.4% over the previous year. A copy of the NJSEM electric auction results is attached. (Attachment “B”)
  
2. Borough Hall -
  - Energy efficient lighting upgrade – Completed
  - Building Management System – Electronic Fuel Use Economizers, Programmable Thermostats
  - Installation began during the week of July 11<sup>th</sup>
  
3. DPW Main Building –
  - Energy efficient lighting upgrade – Completed
  
4. DPW Garage –
  - Energy efficient lighting upgrade – Completed
  
5. Fire Headquarters –
  - Energy efficient lighting upgrade – Completed
  - Building Management System – Electronic Fuel Use Economizers – Roof Top – Completed

6. Library –

Energy efficient lighting upgrade – Completed  
Building Management System – Electronic Fuel Use  
Economizers – Project is scheduled to begin in September

7. Rain Barrels – Rain barrels have been installed at both Borough Hall and the Library. The rain barrel at Borough Hall is located near the Ambulance Corps garage. It is connected to the Borough's leaders and gutters. It is anticipated that the water from the rain barrel will be used by the Ambulance Corps members to water a flower and vegetable garden that they have requested be installed near the picnic table. The rain barrel at the Library will water their garden.
8. Recycled Vegetable Oil – The Borough continues to use recycled vegetable oil in its diesel engine vehicles. During 2010, 1,020 gallons of recycled vegetable oil was used. During 2011 (January 1<sup>st</sup> through July 27<sup>th</sup>) 625 gallons have been used.

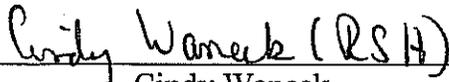
**2011 Goals:**

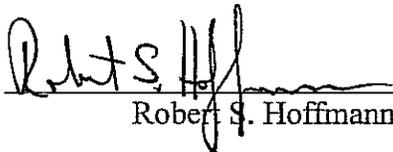
1. Complete the Direct Install Program implementation – *on target for completion by the end of October.*
2. Monitor the recommendations of the energy auditor to ensure that the Borough saves the \$54,000 projected by CDM. A spread sheet has been constructed to track the number of therms and kilowatts used as well as the cost. Over time this will verify that the recommendations have generated efficiency and savings. The recommendations are being monitored on a monthly basis. *A comparison of January 2010 month-to-month through May 2011 shows that the Borough has reduced consumption by 12,168.60 kilowatts and saved approximately \$6,500. (Attachment "C")*
3. Install the micro water turbine in the Pascack Brook to generate kilowatts and act as a laboratory for innovation and improvement of the design. *The turbine has been designed. Permits will now be applied for.*
4. Purchase additional energy efficient vehicles. No hybrid vehicles were purchased in 2010. The Borough has purchased a total of three (3) hybrid vehicles. The Construction Official has requested that a hybrid vehicle be purchased for use by the Code Enforcement Officials. The hybrid will replace a 1995 Chevy Tahoe that is averaging 5.4 miles per gallon. Refer to the vehicle cost analysis for updated information on the viability of hybrid vehicles. (Attachment "D")

For 2011, the following actions merit consideration from the Governing Body and can be implemented upon review and approval.

1. Quantify the potential savings that can occur with the installation solar panels on municipal buildings facing due south or within 22° of due south. Calculate the value of Solar Renewal Energy Certificates (SRECs). Use the sale of these SRECs, which have up to a 15-year life, to finance the cost of the solar panels. *The Environmental Committee has received proposals from solar panel companies and will evaluate the feasibility.*
2. The Environmental Committee is exploring the feasibility of solar power usage. The first project evaluated will be the installation of solar panels to generate power for Westvale Park and the DPW facility. *The Environmental Committee has also received proposals for possible installation of solar panels in municipal lots.*
3. Direct the funds received from the additional kilowatts generated to a trust fund that can be used to pay for either energy improvements or lighting costs. *This would be a policy decision of the Governing Body after considering all of the needs of the Borough.*
4. Develop LEEDS ordinances for use on structures within the Borough. Work with the Planning Board on a master plan reexamination and sustainability element. *The State of New Jersey has adopted LEED Ordinances which eliminate the need for the Borough to introduce similar ordinances.*

Detailed information regarding the items listed above is available upon request. Both the Green Team and Environmental Commission will be preparing additional projects for consideration.

  
Cindy Waneck

  
Robert S. Hoffmann

RSH/lrf  
Attachments

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**INTEROFFICE MEMORANDUM**

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**TO:** MAYOR AND COUNCIL  
**FROM:** ROBERT S. HOFFMANN, BOROUGH ADMINISTRATOR  
 COUNCILWOMAN CINDY WANECK  
**SUBJECT:** BOROUGH OF WESTWOOD SUSTAINABILITY UPDATE 2010-2011  
**DATE:** 1/31/2011  
**CC:** KAREN HUGHES, BOROUGH CLERK

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During calendar year 2010, an energy audit was completed and a report was presented to the governing body in June of 2010 by Camp Dresser McKee (CDM). The cost for the energy audit was \$19,960. The Borough received a reimbursement check on Thursday, January 20, 2011 for the full amount. As a result of our participation in the Energy Audit program, the Borough was able to participate in the State's Direct Install Program. The Direct Install Program provides for 60% of the energy efficiency upgrade cost to be covered directly by the State up to a maximum of \$50,000 per building. Payment is made directly to the approved contractor. The Borough then pays the remaining 40%. Donnelly Energy Systems was assigned to the Borough by the State of New Jersey to verify CDM's June 2010 Energy Audit findings. They confirmed all the findings of the energy audit.

As of October 26, 2010, the following buildings have been accepted into the Direct Install Program. The items listed have been approved for installation. Lighting improvements have been completed at both DPW buildings. As of January 31<sup>st</sup>, lighting improvements are being completed at Fire Headquarters.

Borough Hall	Energy Efficient Lighting Upgrade		
	Building Management System – Electronic Fuel Use Economizers		
	Programmable Thermostats		
	State \$50,000	Borough	\$34,379.64
	Total		\$84,379.64
DPW Main Building	Energy Efficient Lighting Upgrade		
	State \$ 6,106.57	Borough	\$ 4,071.04
	Total		\$10,171.61
DPW Garage	Energy Efficient Lighting Upgrade		
	State \$ 1,379.65	Borough	\$ 919.17
	Total		\$ 2,299.42

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Fire Headquarters	Energy Efficient Lighting Upgrade Building Management System – Electronic Fuel Use Economizers – Roof Top		
	State	\$ 8,897.24	Borough \$ 5,931.50
	Total	\$14,828.74	
Library	Energy Efficient Lighting Upgrade Building Management System – Electronic Fuel Use Economizers		
	State	\$49,454.38	Borough \$32,969.58
	Total	\$82,423.96	

**2010 Accomplishments:**

- Completed the Energy Audit and was accepted into the Direct Install Program.
- Participated in the gas and electric energy consortium (NJSEM) bid.
- Used recycled vegetable oil in diesel engine vehicles. During 2010 1,020 gallons of recycled vegetable oil was used in five (5) DPW diesel trucks.
- Used two (2) electric cars in lieu of two (2) of the Borough's gasoline powered vehicles.
- After evaluating several products the Borough selected and has been using "Green" cleaning products from State Industrial Products. The Custodians report that the cleaning products work well and that they are very satisfied.

**2011 Goals:**

- Complete the Direct Install Program implementation.
- Monitor the recommendations of the energy auditor to ensure that the Borough saves the \$54,000 projected by CDM. A spread sheet has been constructed to track the number of therms and kilowatts used as well as the cost. Over time this will verify that the recommendations have generated efficiency and savings.
- Install the micro water turbine in the Pascack Brook to generate kilowatts and act as a laboratory for innovation and improvement of the design.

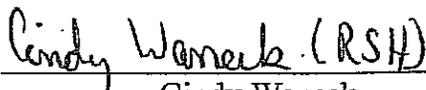
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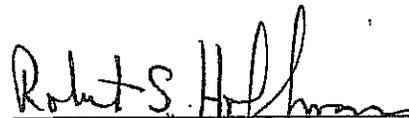
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- The Environmental Committee is exploring the feasibility of solar power usage. The first project evaluated will be the installation of solar panels to generate power for Westvale Park and the DPW facility.
- Direct the funds received from the additional kilowatts generated to a trust fund that can be used to pay for either energy improvements or lighting costs.
- Develop LEEDS ordinances for use on structures within the Borough. Work with the Planning Board on a master plan reexamination and sustainability element.

Detailed information regarding the items listed above is available upon request. Both the Green Team and Environmental Commission will be preparing additional projects for consideration.

  
Cindy Waneck

  
Robert S. Hoffmann

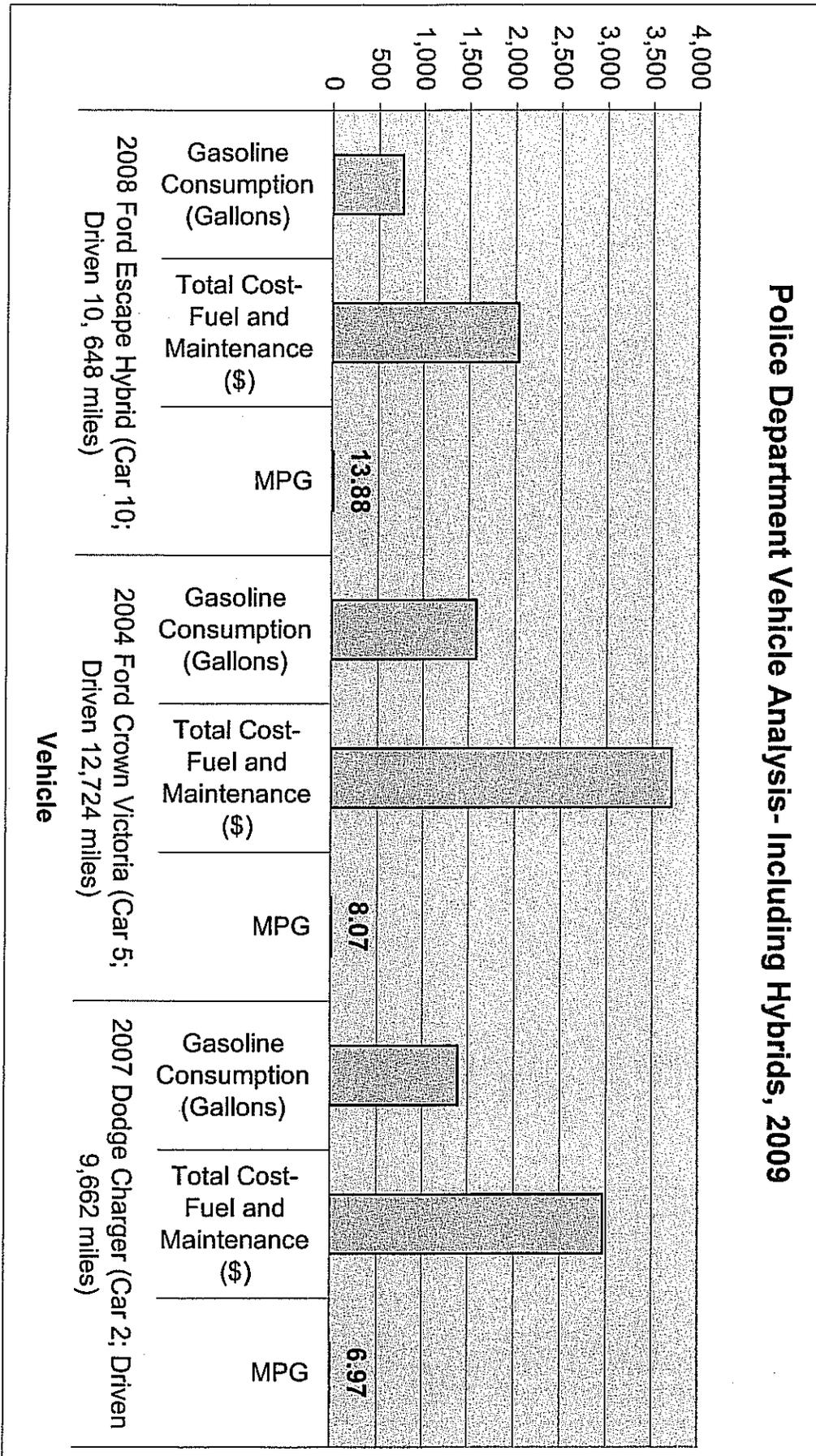


Borough of Westwood					
Utility Bill Analysis					
Calendar Year 2011					
As of 7/8/11					
	<b>Monthly</b>				
	<b>Mean</b>				
<b>Month</b>	<b>Temperature</b>	<b>Total Therms</b>	<b>Total Cost</b>	<b>Total KWH</b>	<b>Total Cost</b>
January	27	8,996.654	13,182.67	67,989.000	10,024.71
February	32.9	10,181.604	13,327.96	68,586.000	10,523.07
March	41	5826.324	7,964.78	60,232.000	9,523.25
April	53.1	1783.82	1,756.24	51,891.000	8,202.11
May	63.5	931.447	893.52	66,443.000	10,152.43
June		0.00	0.00	0.00	0.00
July		0.00	0.00	0.00	0.00
August		0.00	0.00	0.00	0.00
September		0.00	0.00	0.00	0.00
October		0.00	0.00	0.00	0.00
November		0.00	0.00	0.00	0.00
December		0.00	0.00	0.00	0.00
<b>Totals</b>		<b>27,719.849</b>	<b>37,125.170</b>	<b>315,141.000</b>	<b>48,425.570</b>

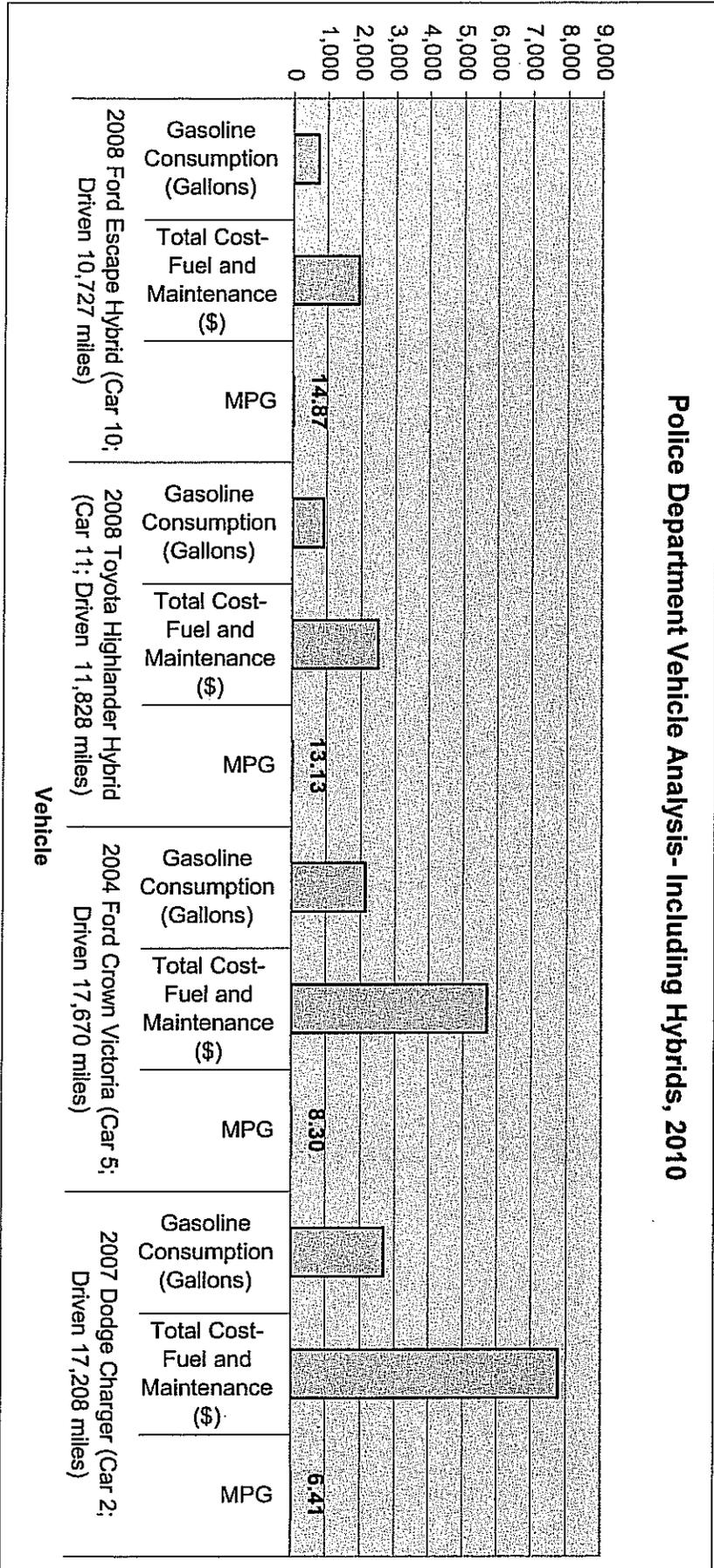
Borough of Westwood					
Utility Bill Analysis					
Calendar Year 2010					
As of 7/8/11					
	<b>Monthly</b>				
	<b>Mean</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
<b>Month</b>	<b>Temperature</b>	<b>Therms</b>	<b>Cost</b>	<b>KWH</b>	<b>Cost</b>
January	31.4	9,084.912	11,243.00	70,625.100	11,819.24
February	30.8	8,581.330	10,390.24	66,620.600	11,283.92
March	45.9	5416.492	6,378.72	60,390.000	10,606.06
April	55.8	1120.441	1,108.07	54,712.000	9,414.87
May	64.2	695.645	985.72	74,962.000	11,803.45
June	74.4	448.224	625.95	88,704.000	18,082.54
July	78.6	353.888	458.92	131,046.000	25,918.81
August	75.4	89.321	167.25	88,154.000	17,257.54
September	69.3	131.007	225.83	81,758.000	16,197.16
October	56.1	406.639	585.62	62,842.000	9,050.31
November	45.0	2660.722	3,483.23	61,190.000	9,673.43
December	30.7	8492.51	22,532.72	152,312.000	23,152.62

Borough of Westwood					
Utility Bill Analysis					
Calendar Year 2009					
As of 7/8/11					
	<b>Monthly</b>				
	<b>Mean</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
<b>Month</b>	<b>Temperature</b>	<b>Therms</b>	<b>Cost</b>	<b>KWH</b>	<b>Cost</b>
January	27.3	8,921.507	11,798.39	63,565.000	9,375.68
February	35.1	8,095.361	9,648.98	62,993.000	9,603.35
March	40.8	5,804.459	6,376.24	57,480.000	8,910.30
April	52.8	3,348.065	3,190.42	65,720.000	13,089.80
May	61.6	709.927	688.08	75,232.000	11,753.17
June	67.7	415.175	428.78	72,272.000	15,633.88
July	72.4	278.490	319.18	86,938.000	4,358.51
August	75.6	289.979	317.55	85,040.000	18,976.10
September	65.2	180.215	209.94	72,626.000	16,448.53
October	53.7	1,454.369	1,375.58	57,294.000	10,334.60
November	49.6	2,412.173	2,616.09	61,494.000	10,443.88
December	34.7	7,023.399	7,791.72	66,121.000	11,108.26

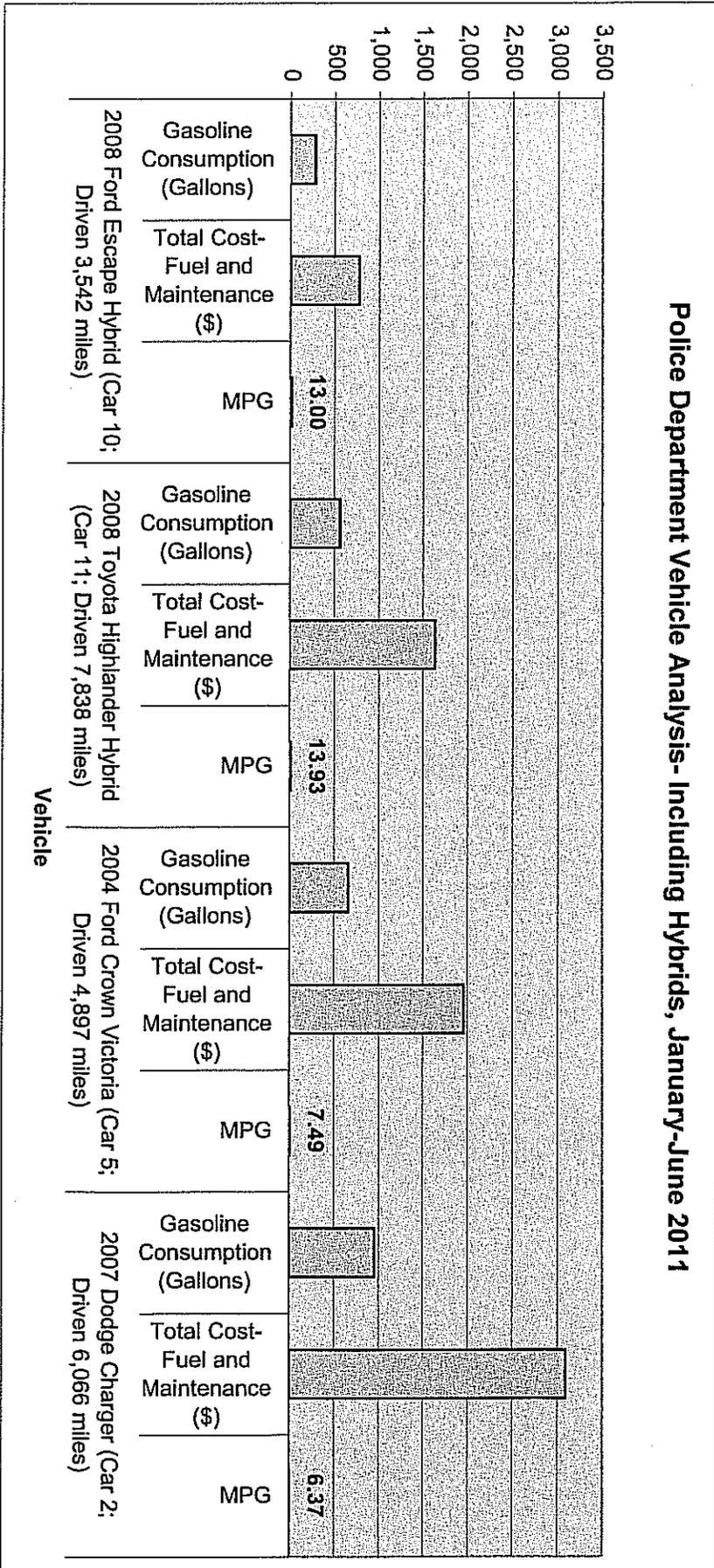
**Police Department Vehicle Analysis- Including Hybrids, 2009**



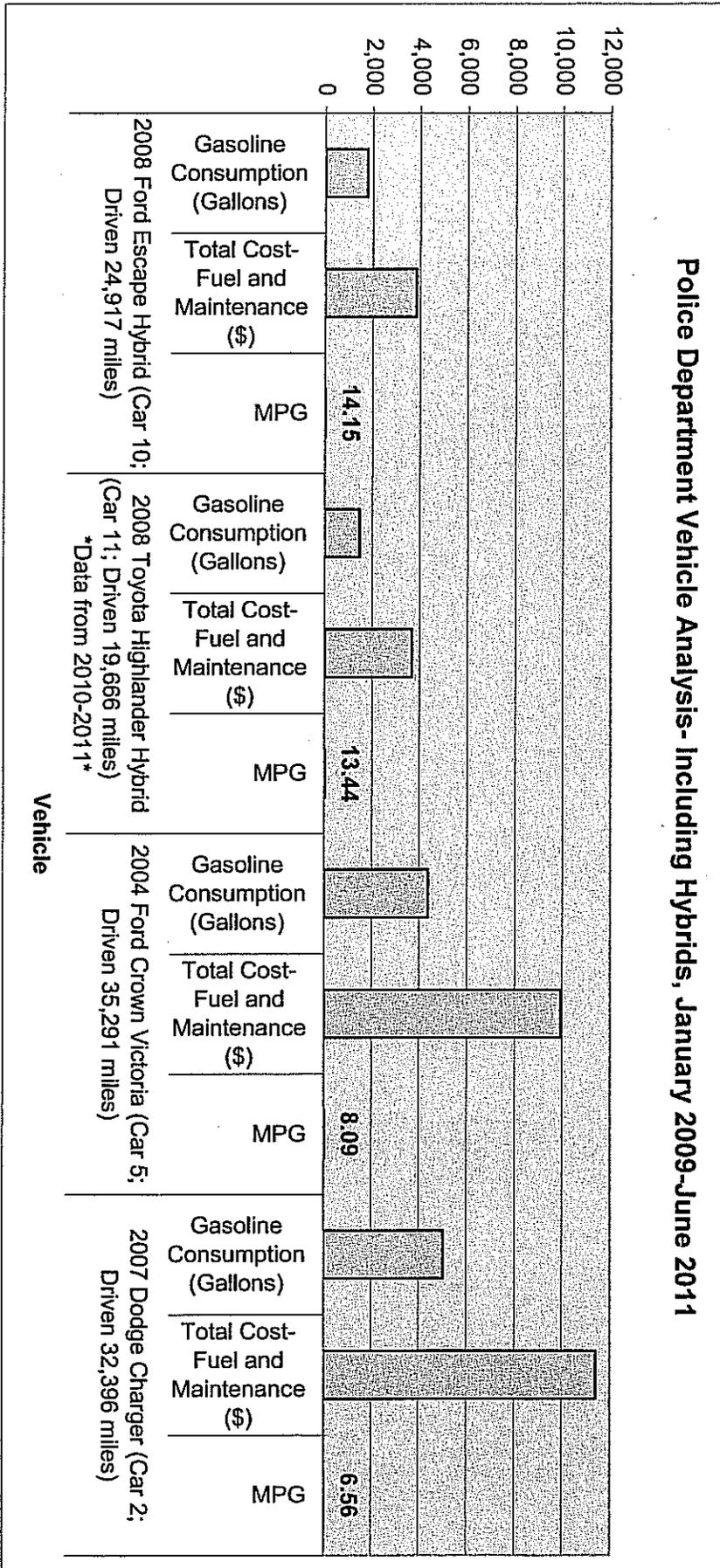
### Police Department Vehicle Analysis- Including Hybrids, 2010



Police Department Vehicle Analysis- Including Hybrids, January-June 2011



Police Department Vehicle Analysis- Including Hybrids, January 2009-June 2011



**Police Department Vehicle Projections- Including Hybrids, July-December 2011**

