



**Metro Nashville**  
**DISTRICT ENERGY SYSTEM**

*Advisory Board Quarterly Meeting*  
*Third Quarter FY10*

*Presented to*  
*District Energy Advisory Board*

*May 20, 2010*



## *Agenda*

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Review of DES Contractor Performance
4. Natural Gas Purchasing Status
5. Financial Reports – 3<sup>rd</sup> Qtr FY10
6. FY11 Budget Status Report
7. Capital Projects Review & Status Report Update
8. Music City Convention Center Expansion Update
9. Damage Report from May 1-2, 2010 Flood
10. Adjourn



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**DISTRICT ENERGY SYSTEM**




*1. Call to Order*

*2. Review and Approval of Previous  
Meeting Minutes*



### *3. Review of DES Contractor Performance*

Contractor (CNDE) is in compliance with their contractual obligations for FY10.

-  Excellent Performance – No Improvement Necessary
-  Satisfactory Performance – Some Improvement Could Be Made
-  Poor Performance – Much Improvement Necessary



*Summary Table 3: Customer Cost Comparison for the Previous 12 Months*

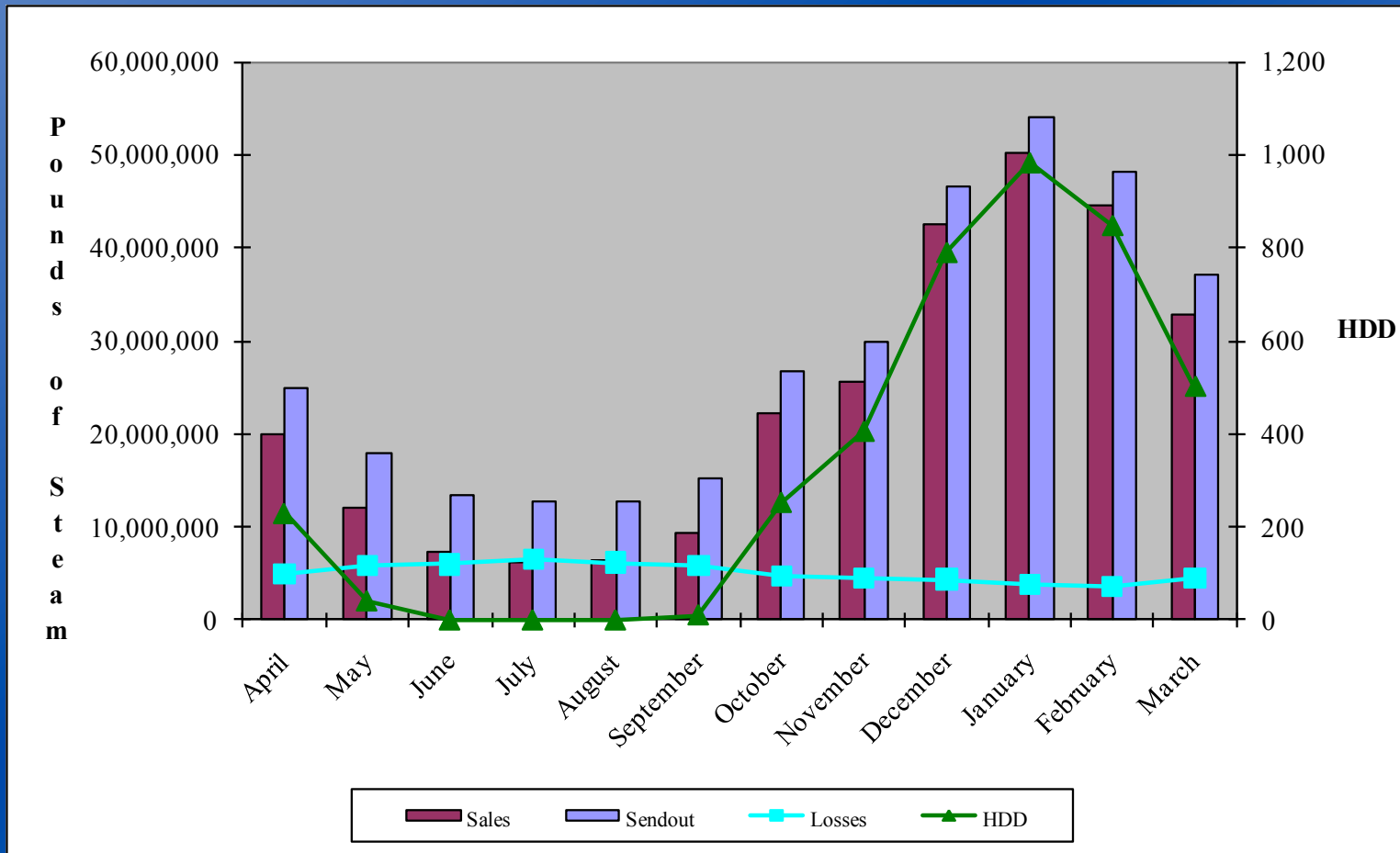
	Steam (\$ millions)			Chilled Water (\$ millions)		
	04/08 – 03/09	04/09-03 /10	% Diff.	04/08 – 03/09	04/09-03 /10	% Diff.
Private	\$2.378	\$1.783	-25.0%	\$3.775	\$3.467	-8.2%
State	\$3.062	\$2.349	-23.3%	\$3.271	\$3.212	-1.8%
Metro	\$2.869	\$2.013	-29.8%	\$3.089	\$2.915	-5.6%
Aggregate	\$8.308	\$6.144	-26.1%	\$10.135	\$9.593	-5.3%

\*FY08 MFA = \$2,193,075; FY09 MFA = \$3,217,986 post-True-up; MFA not included in values shown



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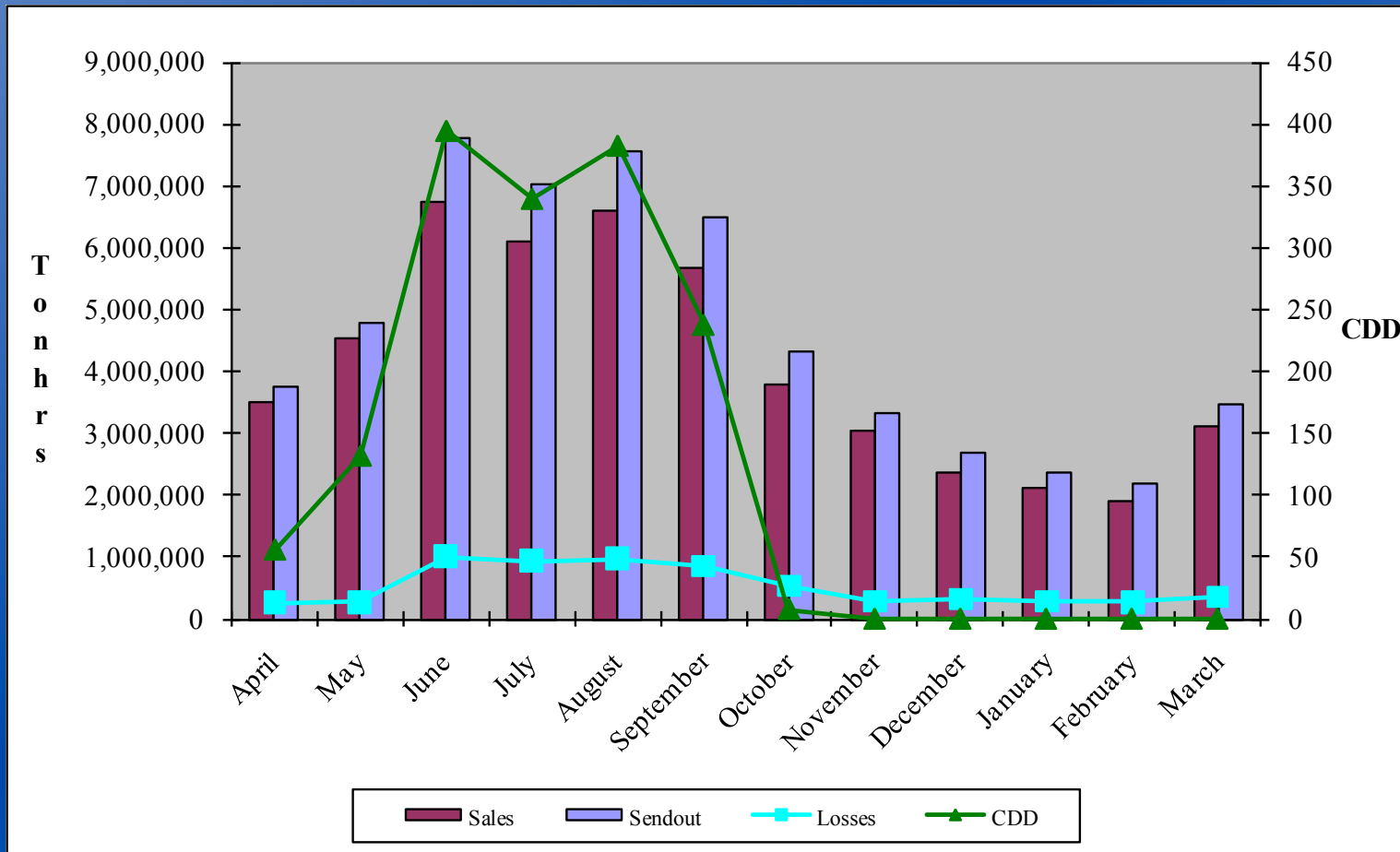
## FY10 Operations: Steam





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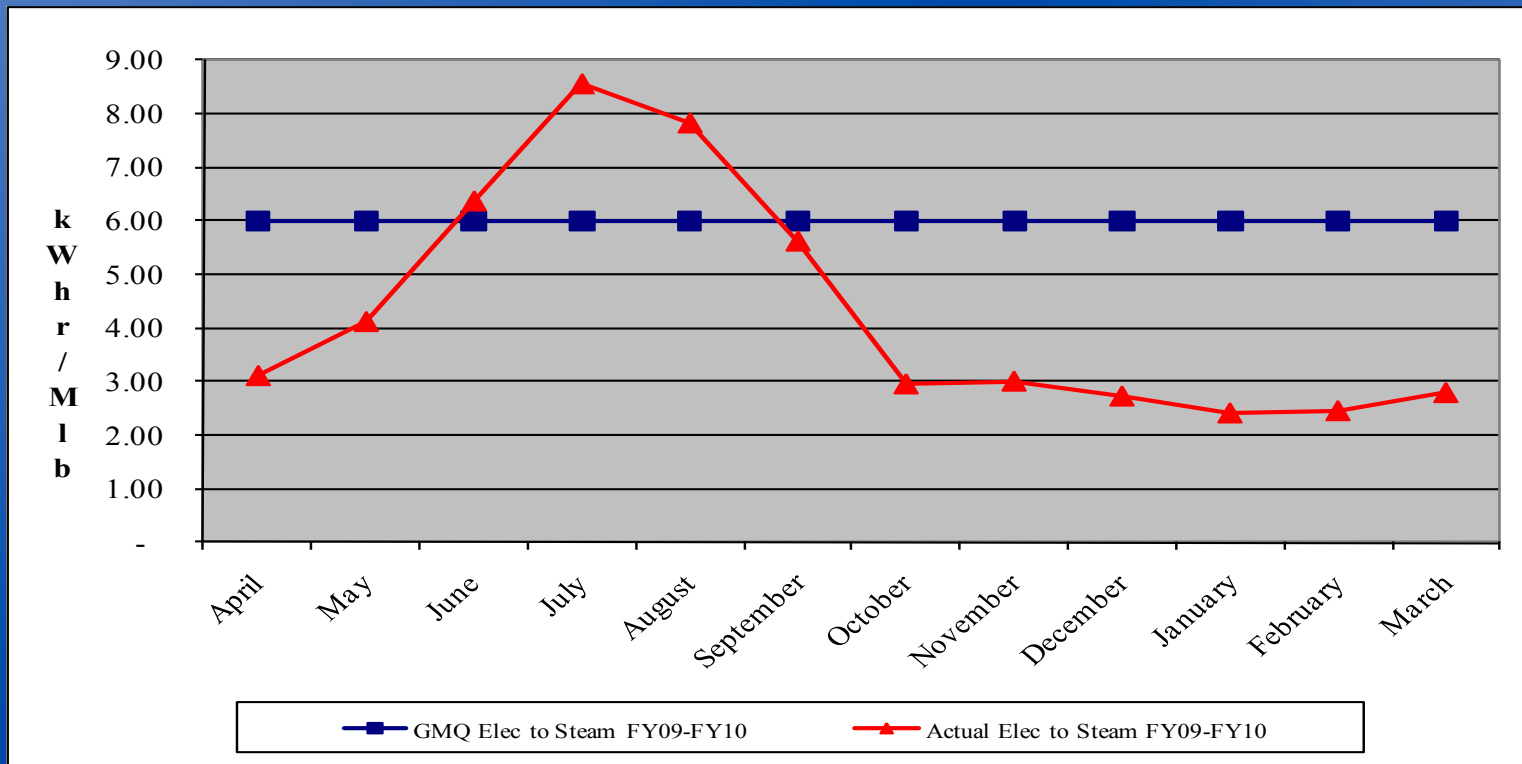
## FY10 Operations: Chilled Water





# *Performance Measurement FY10: Steam*

## *Electric Conversion*

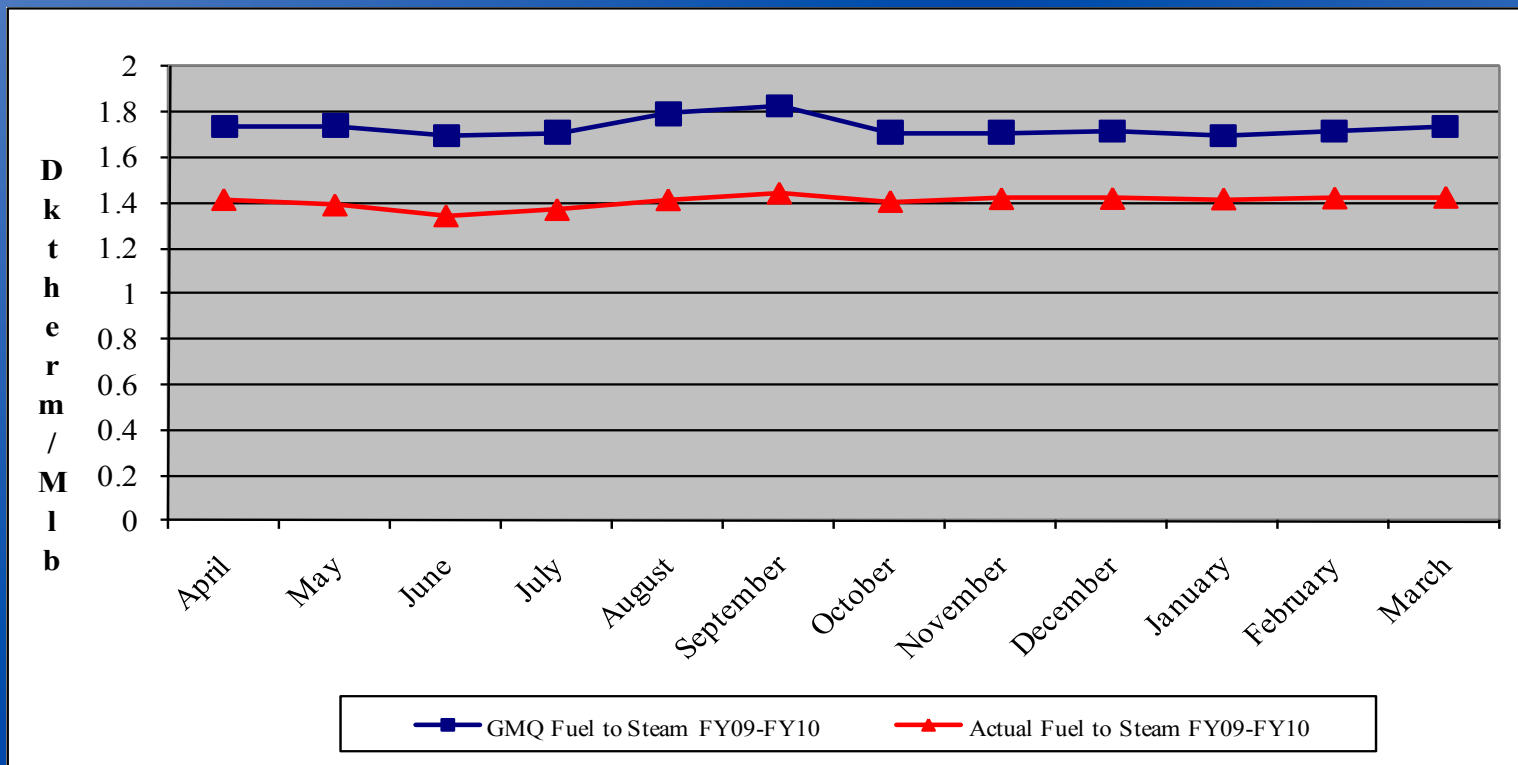






# Performance Measurement FY10: Steam

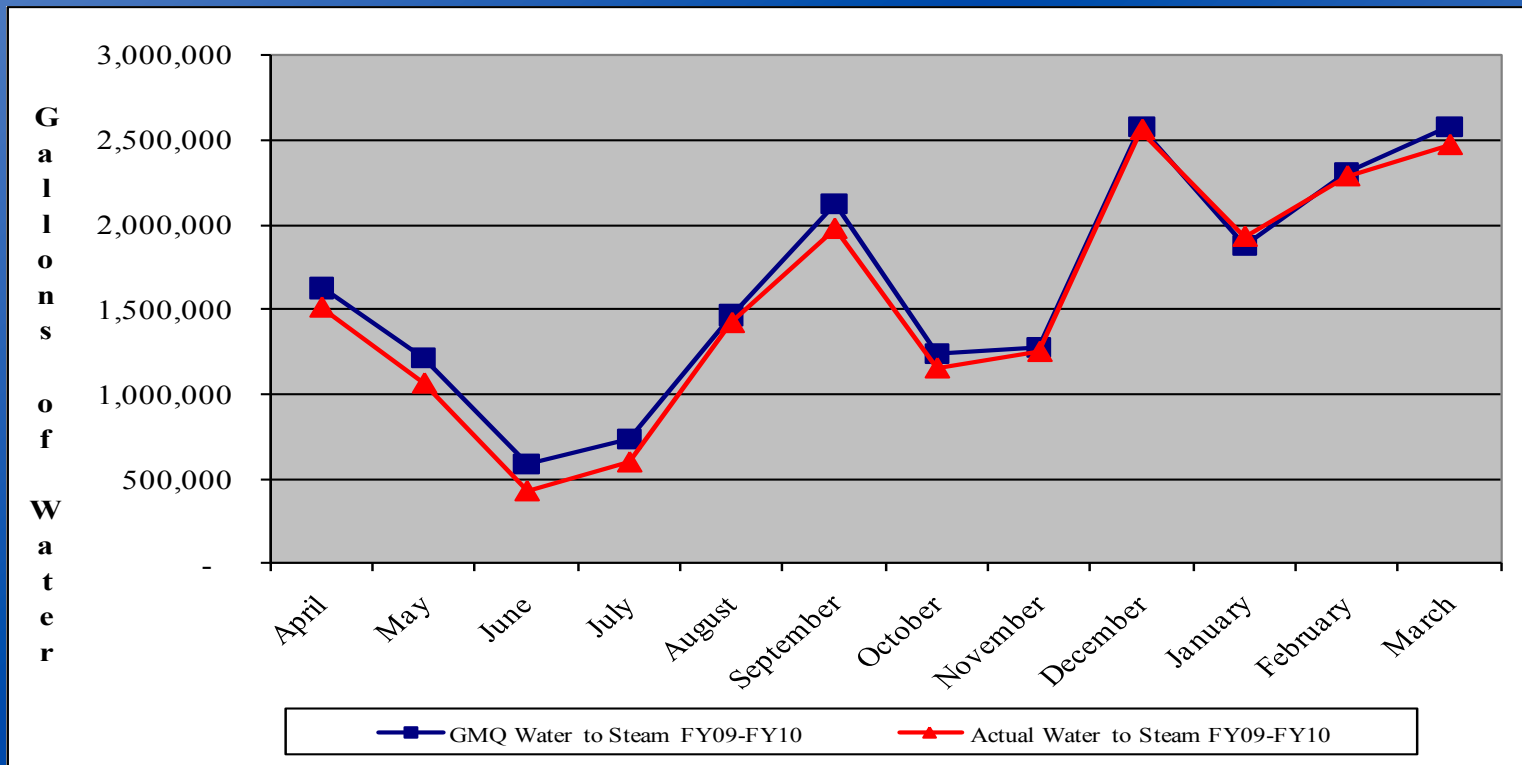
## Plant Efficiency ●





# *Performance Measurement FY10: Steam*

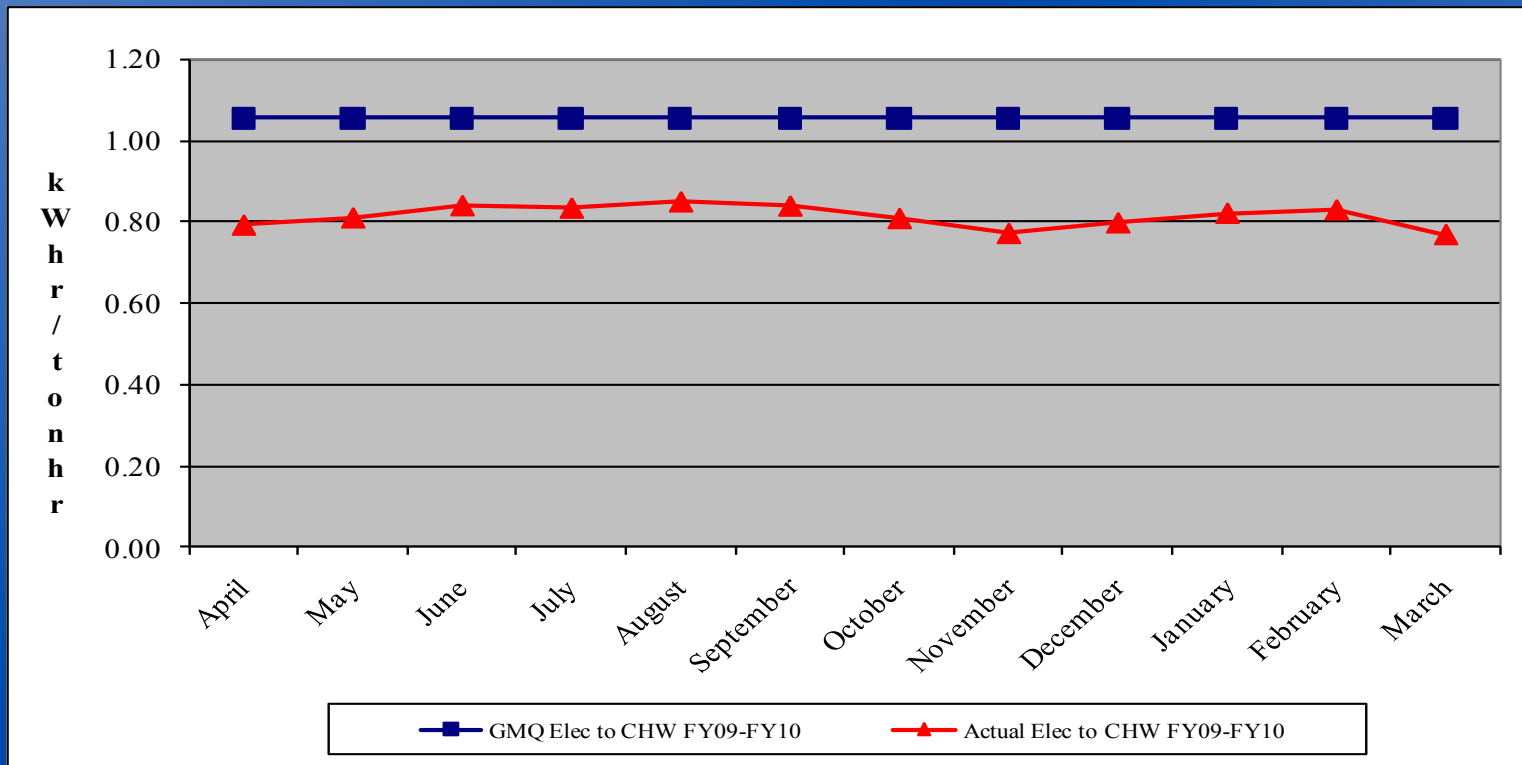
## *Water Conversion*





# *Performance Measurement FY10: Chilled Water*

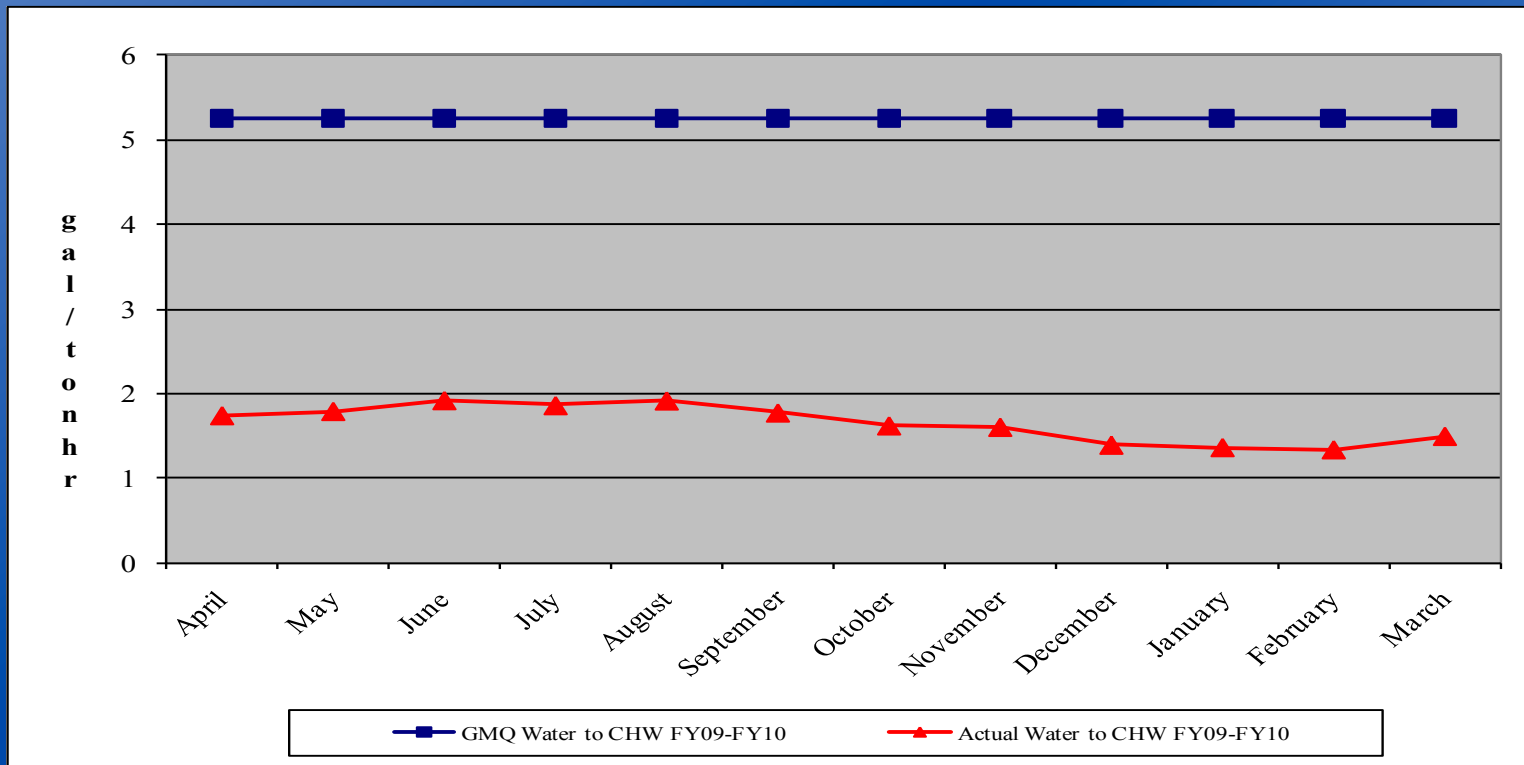
## *Electric Conversion*





# *Performance Measurement FY10: Chilled Water*

## *Water Conversion*





## *Water Treatment*

- Steam/Condensate
  - Corrosion ●
  - Iron ●
  - Hardness ●
  - Chlorine/Sulfite ●
- Condensing Water
  - Conductivity ●
  - Biologicals ●
- Chilled Water
  - Hardness ●
  - Corrosion ●
  - Biologicals ●



## *EGF Walkthrough*

### Quarterly Inspection Process

- Equipment Maintenance ●
- Operations ●
- Electrical ●
- Housekeeping ●
- Building Structure ●
- Building Exterior and Grounds ●



## *EDS Walkthrough*

### Quarterly Inspection Process

- Manhole/Tunnel Housekeeping ●
- Maintenance Items
  - Insulation Repair/Replacement ●
  - Water Infiltration ●
  - Corrosion of Structural Metal Components ●
- Safety Items ●



## *4. Natural Gas Purchasing*

### **Natural Gas Purchasing Review**

**Table 4: FY10 Gas Spending & Budget  
Comparison**

**Figure 4: Actual and Projected Gas Cost  
Comparison for FY10**





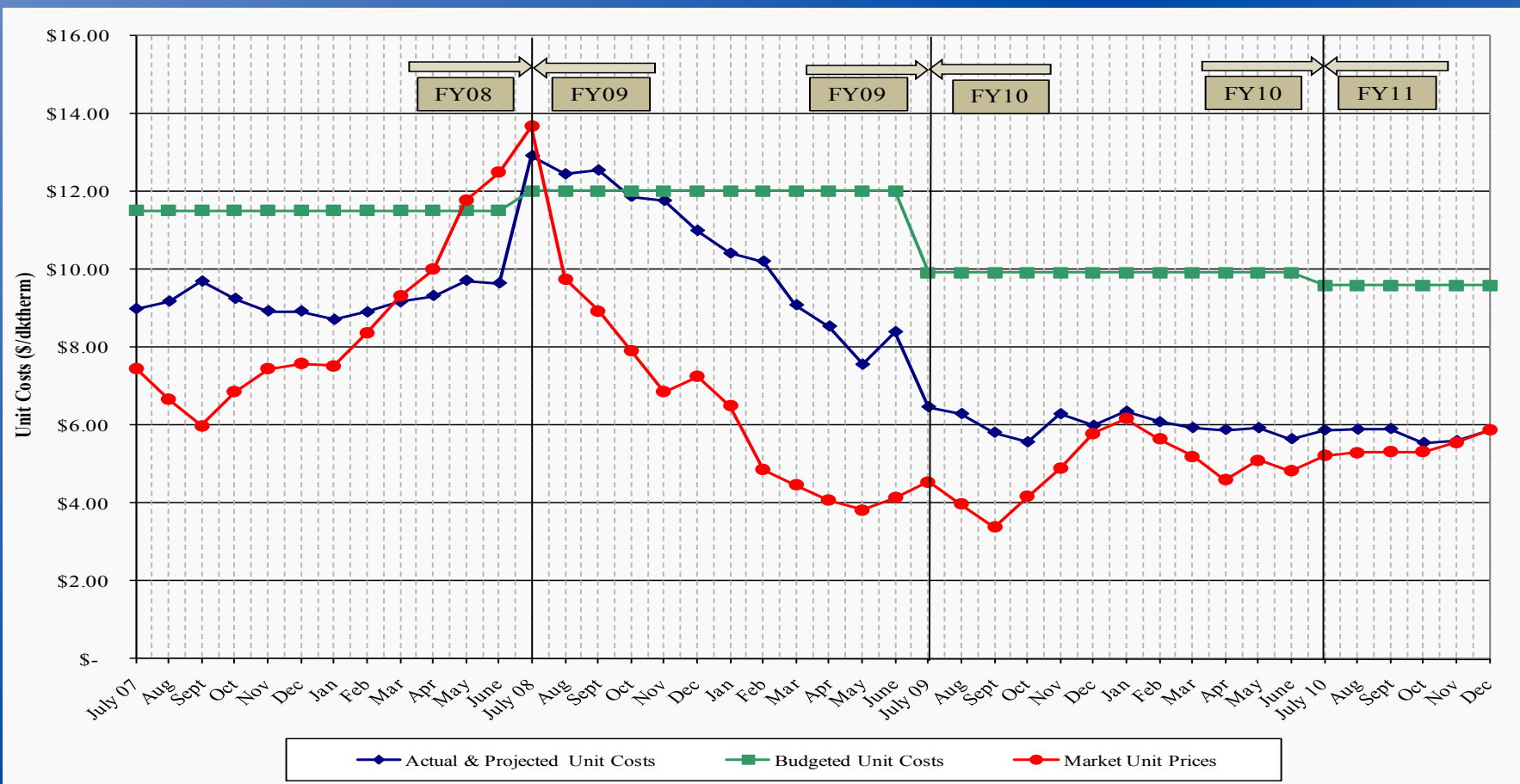
*Table 4: FY10 Gas Spending & Budget Comparison*

		<b>Actual FY10 To date (Mar 31)</b>	<b>Budget FY10</b>
Steam Sendout (Mlbs)		283,730	281,724
Fuel Use (Dth) (includes propane)	●	403,030	408,500
Plant Eff (Dth/Mlb)	●	1.420	1.450
Total Gas Cost (includes propane)	●	\$2,600,341	\$4,013,921
Unit Cost of Fuel (\$/Dth)	●	\$6.452	\$9.826



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*Fig 4. Actual and Projected Gas Cost Comparison for FY10*





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### 5. Financial Reports: 3<sup>rd</sup> Qtr FY10

Item	FY10 Budget	Total Expenses to Date (3rd Qtr)	Percent of FY10 Budget
FOC: Basic	\$ 3,976,200	\$ 2,889,128	72.66%
FOC: 9th Chiller	\$ 37,200	\$ 27,071	72.77%
FOC: Change Order 6A	\$ 73,400	\$ 53,447	72.82%
FOC: Change Order 6B	\$ 64,300	\$ 46,791	72.77%
Chemicals	\$ 161,200	\$ 111,886	69.41%
Engineering	\$ 26,200	\$ 7,434	28.37%
Insurance	\$ 43,700	\$ 27,723	63.44%
Marketing: CEPS Sales Activity	\$ 9,800	\$ -	0.00%
Metro Marketing	\$ 35,000	\$ 21,025	60.07%
Incentive Payments	\$ -	\$ -	n.a.
Project Administration	\$ 24,000	\$ -	0.00%
Metro Incremental Cost	\$ 526,400	\$ 292,995	55.66%
FEA: Steam	\$ -	\$ 111,102	n.a.
FEA: Chilled Water	\$ -	\$ 259,187	n.a.
ARFA	\$ -	\$ 41,960	n.a.
Metro Credit	\$ -	\$ (451,755)	n.a.
Water/Sewer	\$ 689,600	\$ 253,450	36.75%
Natural Gas/Propane	\$ 4,692,900	\$ 2,600,341	55.41%
Electricity	\$ 5,034,100	\$ 2,785,634	55.34%
EDS Repair & Improvement	\$ 176,500	\$ 140,085	79.37%
EDS Surcharge	\$ 70,600	\$ -	0.00%
<b>Sub-total Operations</b>	<b>\$ 15,641,100</b>	<b>\$ 9,217,505</b>	<b>58.93%</b>
2002 Bonds	\$ 4,362,900	\$ 3,272,129	75.00%
2005 Bonds	\$ 627,600	\$ 796,381	126.89%
FY07 Projects	\$ 227,800	\$ 448,300	196.80%
FY08 Projects	\$ 220,500	\$ 448,300	203.31%
Debt Service Interest Revenue	\$ (123,700)	\$ (32,000)	25.87%
Oper. Reserve Funding Deposit	\$ -	\$ -	n.a.
<b>Sub-total Debt Service</b>	<b>\$ 5,315,100</b>	<b>\$ 4,933,110</b>	<b>92.81%</b>
<b>Total Expenses</b>	<b>\$ 20,956,200</b>	<b>\$ 14,150,615</b>	<b>67.52%</b>
<b>Customer Revenues</b>	<b>\$ 18,512,100</b>	<b>\$ 11,593,811</b>	<b>62.63%</b>
<b>Total Metro Funding Amount</b>	<b>\$ 2,444,100</b>	<b>\$ 2,556,804</b>	<b>104.61%</b>



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### 6. FY11 Budget Status Review

Item	FY10 Budget	FY11 Budget	Percent Change from FY10
FOC: Basic + C/O 6C	\$ 3,976,200	\$ 3,976,200	0.00%
FOC: 9th Chiller	\$ 37,200	\$ 37,200	0.00%
FOC: Change Order 6A	\$ 73,400	\$ 73,400	0.00%
FOC: Change Order 6B	\$ 64,300	\$ 64,300	0.00%
Chemicals	\$ 161,200	\$ 150,000	-6.95%
Engineering	\$ 26,200	\$ 26,200	0.00%
Insurance	\$ 43,700	\$ 27,700	-36.61%
Marketing: CEPS Sales Activity	\$ 9,800	\$ -	-100.00%
Metro Marketing	\$ 35,000	\$ 15,000	-57.14%
Incentive Payments	\$ -	\$ -	n.a.
Project Administration	\$ 24,000	\$ 30,700	27.92%
Metro Incremental Cost	\$ 526,400	\$ 469,900	-10.73%
Water/Sewer	\$ 689,600	\$ 574,000	-16.76%
Natural Gas/Propane	\$ 4,692,900	\$ 4,445,500	-5.27%
Electricity	\$ 5,034,100	\$ 4,949,700	-1.68%
EDS Repair & Improvement	\$ 176,500	\$ 176,500	0.00%
EDS Surcharge	\$ 70,600	\$ 70,600	0.00%
<b>Sub-total Operations</b>	<b>\$ 15,641,100</b>	<b>\$ 15,086,900</b>	<b>-3.54%</b>
2002 Bonds	\$ 4,362,900	\$ 4,239,500	-2.83%
2005 Bonds	\$ 627,600	\$ 628,100	0.08%
2007 Bonds	\$ 227,800	\$ 227,800	0.00%
2008 Bonds	\$ 220,500	\$ 220,500	0.00%
2010 Bonds	\$ -	\$ -	n.a.
Interest Revenue	\$ (123,700)	\$ (100,000)	-19.16%
Oper. Reserve Funding Deposit	\$ -	\$ -	n.a.
<b>Sub-total Debt Service</b>	<b>\$ 5,315,100</b>	<b>\$ 5,215,900</b>	<b>-1.87%</b>
<b>Total Expenses</b>	<b>\$ 20,956,200</b>	<b>\$ 20,302,800</b>	<b>-3.12%</b>
<b>Customer Revenues</b>	<b>\$ 18,488,100</b>	<b>\$ 17,828,000</b>	<b>-3.57%</b>
<b>Project Admin. Revenue</b>	<b>\$ 24,000</b>	<b>\$ 30,700</b>	<b>27.92%</b>
	\$ -	\$ -	n.a.
<b>Total Metro Funding Amount</b>	<b>\$ 2,444,100</b>	<b>\$ 2,444,100</b>	<b>0.00%</b>



## *Capital Expenditure Update*

	<b>Spent to End of FY09</b>	<b>FY10 Spending</b>	<b>Balance to Date (04/22/10)</b>
R&I Projects	\$764,130	\$140,465	\$503,796
2005B Bond	\$7,920,090	\$142,032	\$124,378
2007 Bond	\$2,620,771	\$0	\$237,729
2008 Bond	\$1,846,622	\$1,031,878	\$0
2010 Bond	\$0	\$99,994	\$2,310,006
<b>Total</b>	<b>\$10,530,842</b>	<b>\$1,414,369</b>	<b>\$3,175,909</b>



## *7. Capital Projects Review*

### *Active Capital Projects*

- DES 060: MH Insulation - in construction/ongoing
- DES 061: Manhole & Tunnel Steel Corrosion Repair & Prevention – in design
- DES 062: Replacement of Stm and Cond Service to 120 2<sup>nd</sup> Ave. North (Wildhorse Saloon) - in closeout
- DES 066: 1<sup>st</sup> Avenue Manhole & Steam Line Removal from Service - in closeout
- DES 067: Tunnel Rock Rehabilitation: Broadway, 7<sup>th</sup> & 4<sup>th</sup> Ave. – awaiting formal award
- DES 068: Manhole 10 Repair – in construction
- DES 069: Municipal Auditorium Tempering Station – in construction
- DES 073: MH-18 Condensate and Platform Modification – awaiting DES 067
- DES 076: MH-S4A State Manhole Rebuild - in design; constr. to begin in June
- DES 077: Expansion of Service to the Music City Convention Center - in design





## *FY 2010 Proposed Projects*

- DES 048: Tunnel Lighting Replacement Phase III – awaiting DES 067
- DES 059: CJC Steam & Condensate Line Replacement – deferred
- DES 063: Sump Pump Installation in MH A, B & M – on standby
- DES 070: MH 6 to 23 Condensate Line Replacement – deferred to FY11
- DES 071: Hermitage Hotel Service Modifications – deferred to FY11
- DES 072: Sheraton Hotel Steam and Condensate Replacement



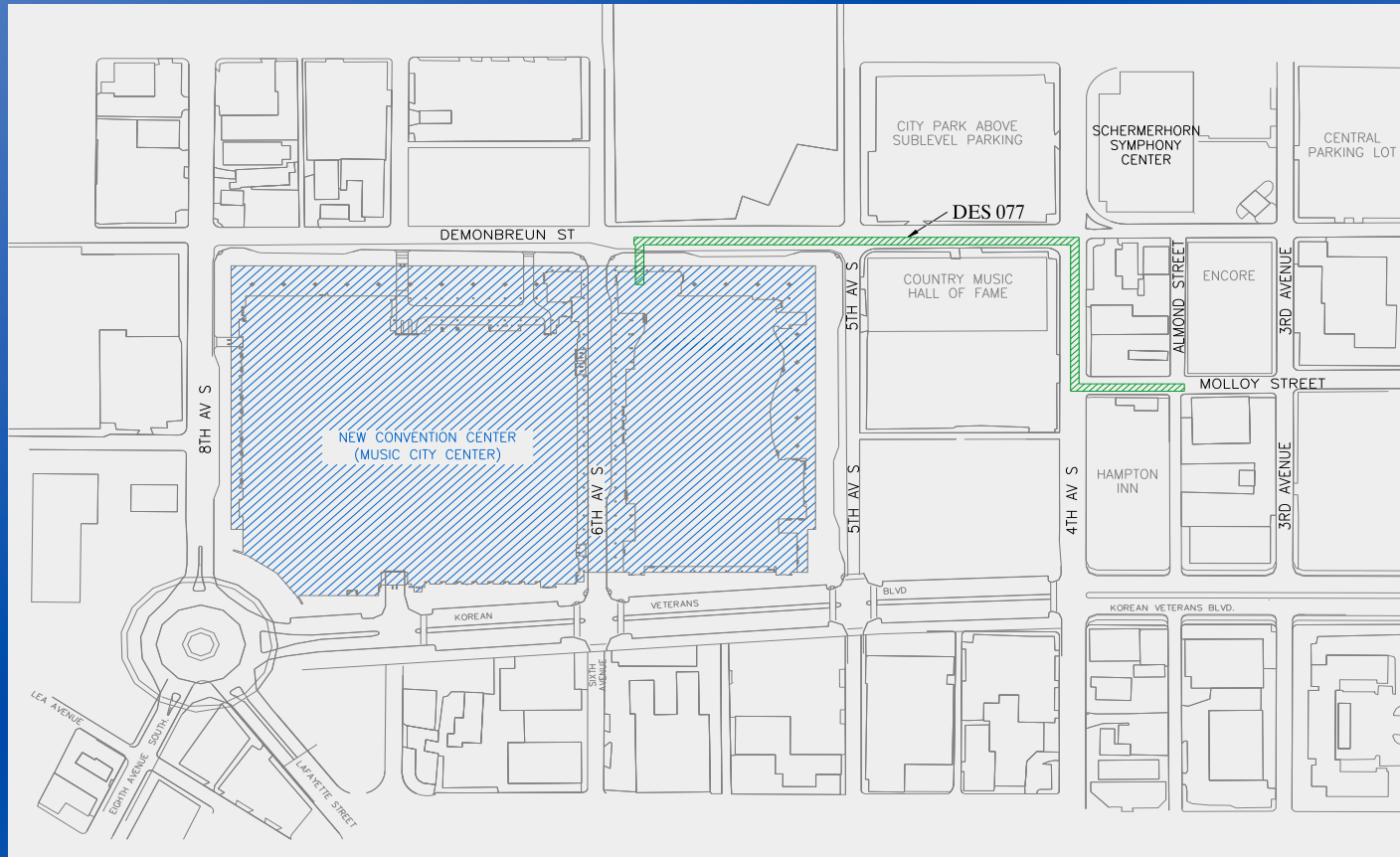
## *8. Music City Convention Center Expansion Update*

- Music City Convention Center
  - 5,820 tons (contract)
  - 53,130 pph (contract)
- Estimated Capital Cost \$6,022,000
- Estimated \$700,000 (~27% ) Reduction in MFA
- Design Progressing w/Bid Date by 06/11/2010
- “Service Ready” Anticipated 03/15/2011





# *Music City Convention Center Location & Routing Plan*





## *9. Damage Report from May 1-2, 2010 Flood*

- Actual Costs to Date (05/14/10) - \$32,000
- Anticipated Budget Cost
  - Electrical/Lighting - \$16,000 to \$20,000
  - Communications System - \$40,000 to \$60,000
  - Insulation - \$80,000 to \$120,000
  - Total Anticipated Cost - \$168,000 to \$232,000



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*First Avenue South-Looking North  
from Shelby St Bridge*



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*First Avenue South-Looking South  
from Shelby St Bridge*





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*River Front Park*



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## *10. Adjourn*