

Metro Nashville
DISTRICT ENERGY SYSTEM



DES Advisory Board Meeting
First Quarter FY14
November 21, 2013



Agenda

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Customer Sales
4. Review of DES Contractor Performance
5. Natural Gas Purchasing Status
6. FY14 Costs to Date
7. FY14 Budget Update
8. Capital Projects Review & Status Report Update
9. Other Board Member Items
10. Adjourn



1. *Call to Order*
2. *Review and Approval of
Previous Meeting Minutes*



3. Customer Sales

- ❖ Table 3: Customer Cost Comparison
- ❖ Figure 3A: Historic CHW Consumptions
- ❖ Figure 3B: Historic Steam Consumptions

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

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		Oct 2011 - Sept 2012	Oct 2012 - Sept 2013	% Diff.	Oct 2011 - Sept 2012	Oct 2012 - Sept 2013	% Diff.
Private	Cost	\$ 1,397,842	\$ 1,343,932	-3.86%	\$ 3,424,312	\$ 3,308,859	-3.37%
	Usage (lbs or tonhrs)	77,661,948	88,241,945	13.62%	17,886,987	17,114,941	-4.32%
	Unit Cost	\$ 18.00	\$ 15.23	-15.4%	\$ 0.191	\$ 0.193	1.0%
State	Cost	\$ 1,821,194	\$ 1,902,479	4.46%	\$ 3,445,843	\$ 3,403,469	-1.23%
	Usage (lbs or tonhrs)	88,566,614	114,540,906	29.33%	17,219,018	16,657,102	-3.26%
	Unit Cost	\$ 20.56	\$ 16.61	-19.2%	\$ 0.200	\$ 0.204	2.1%
Metro	Cost	\$ 1,710,984	\$ 2,367,019	38.34%	\$ 4,132,435	\$ 4,867,041	17.78%
	Usage (lbs or tonhrs)	91,412,210	182,651,578	99.81%	24,378,049	29,698,639	21.83%
	Unit Cost	\$ 18.72	\$ 12.96	-30.8%	\$ 0.170	\$ 0.164	-3.3%
Aggregate	Cost	\$ 4,930,021	\$ 5,613,431	13.86%	\$ 11,002,590	\$ 11,579,369	5.24%
	Usage (lbs or tonhrs)	257,640,772	385,434,429	49.60%	59,484,054	63,470,682	6.70%
	Unit Cost	\$ 19.14	\$ 14.56	-23.9%	\$ 0.185	\$ 0.182	-1.37%

MFA not included in values shown

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Figure 3A: Historic CHW Consumptions

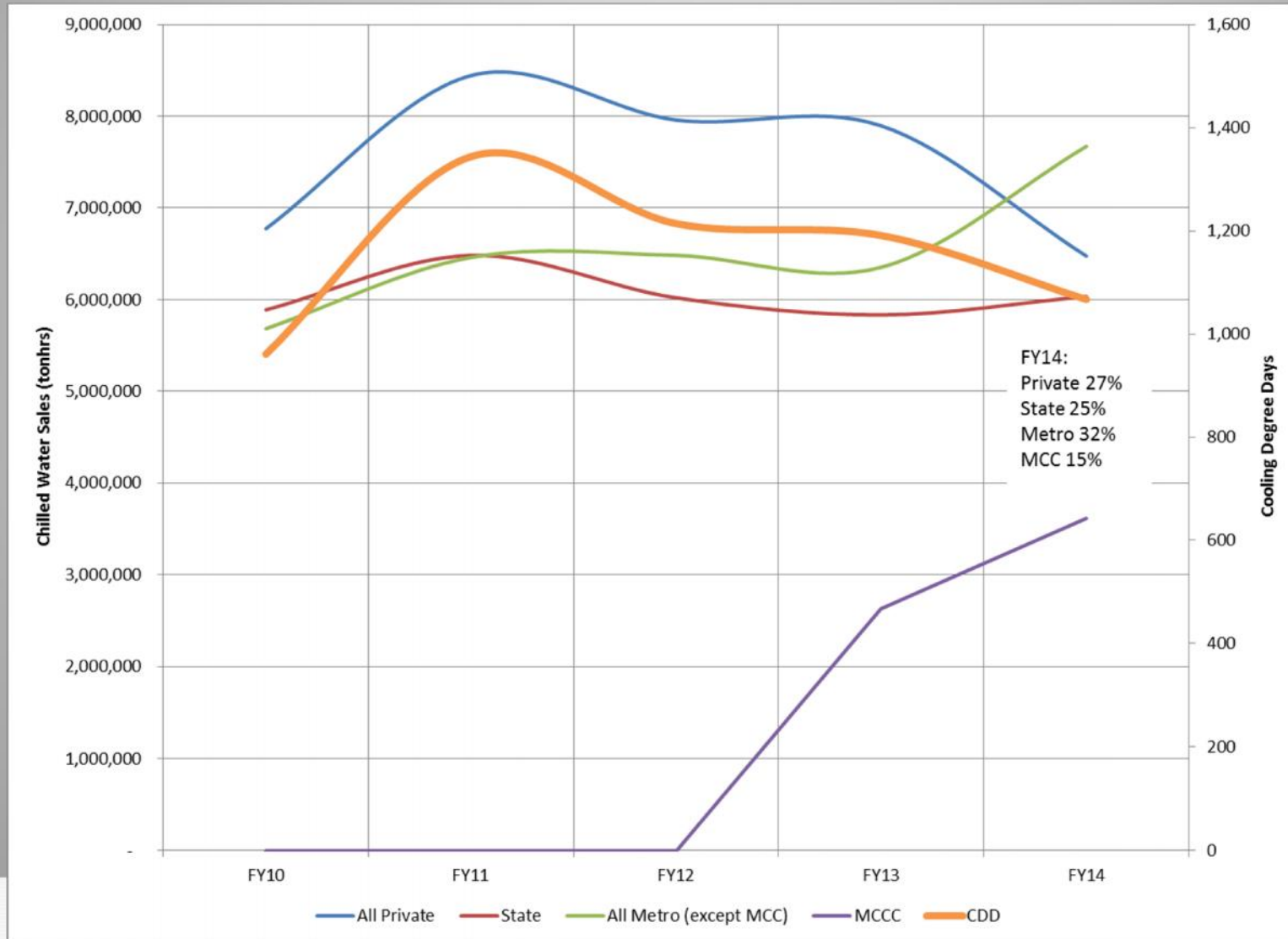
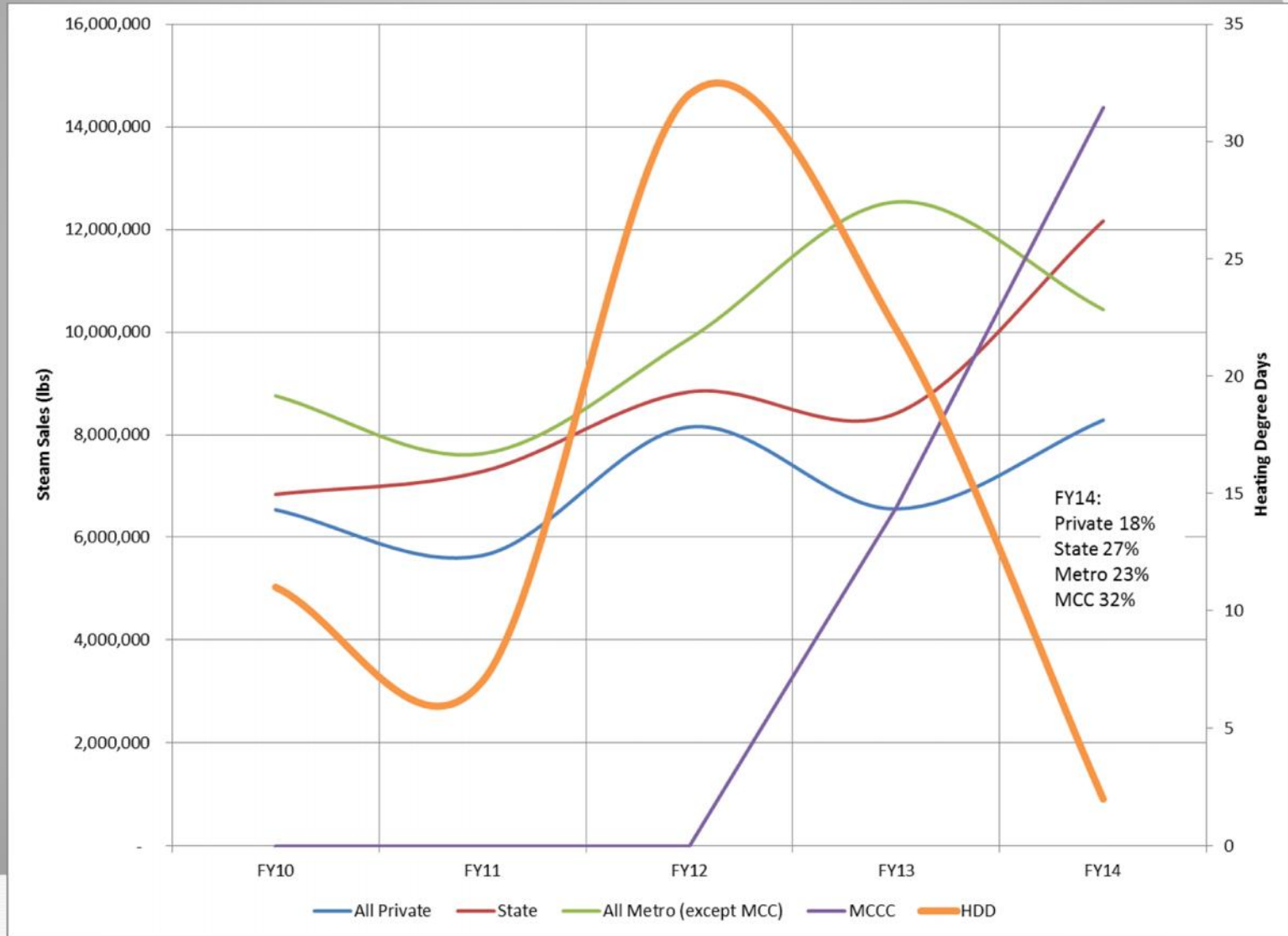







Figure 3B: Historic Steam Consumptions





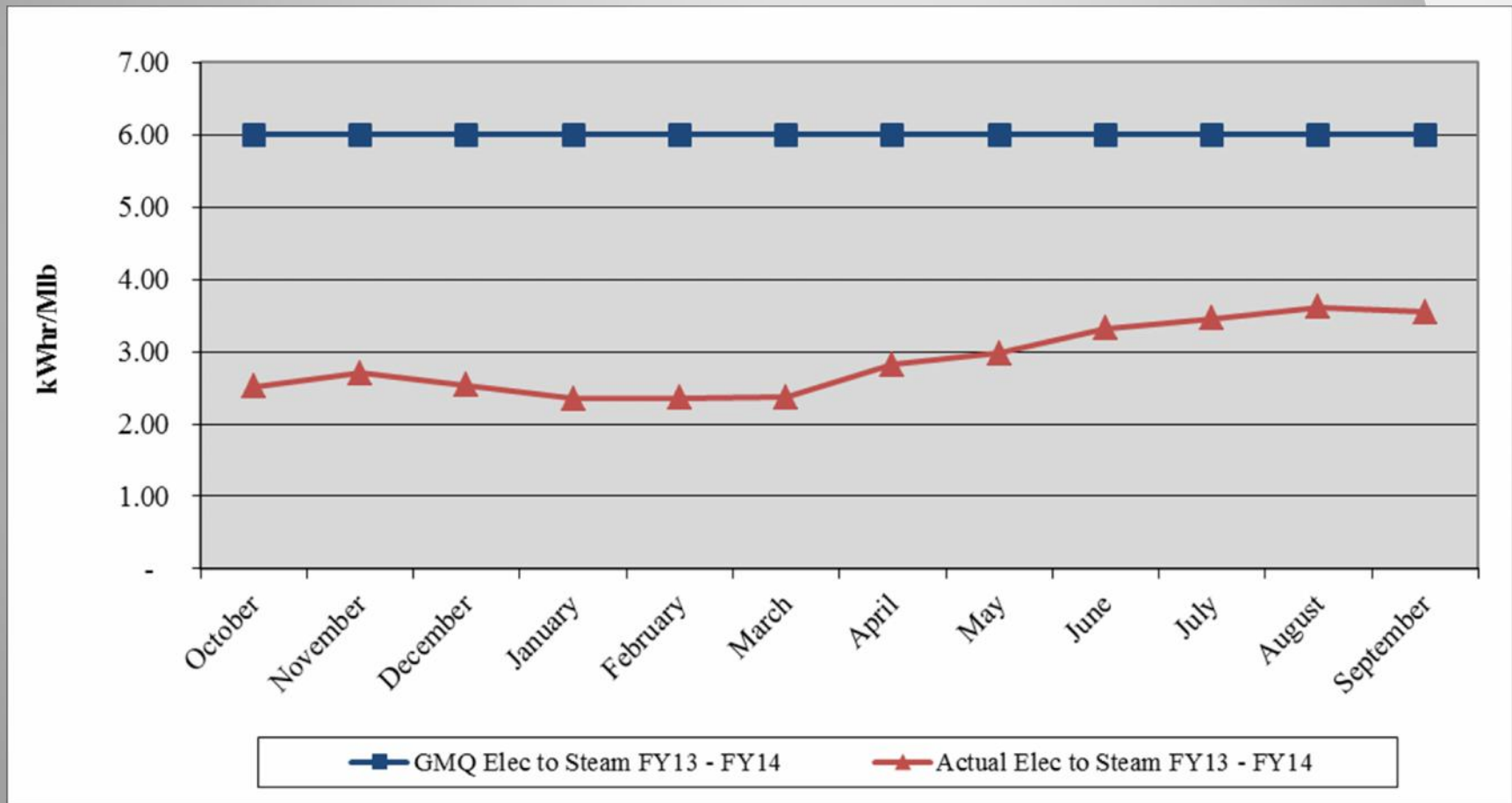
4. Review of DES Contractor Performance

Contractor (CNE) is in compliance with their contractual obligations for FY14.

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

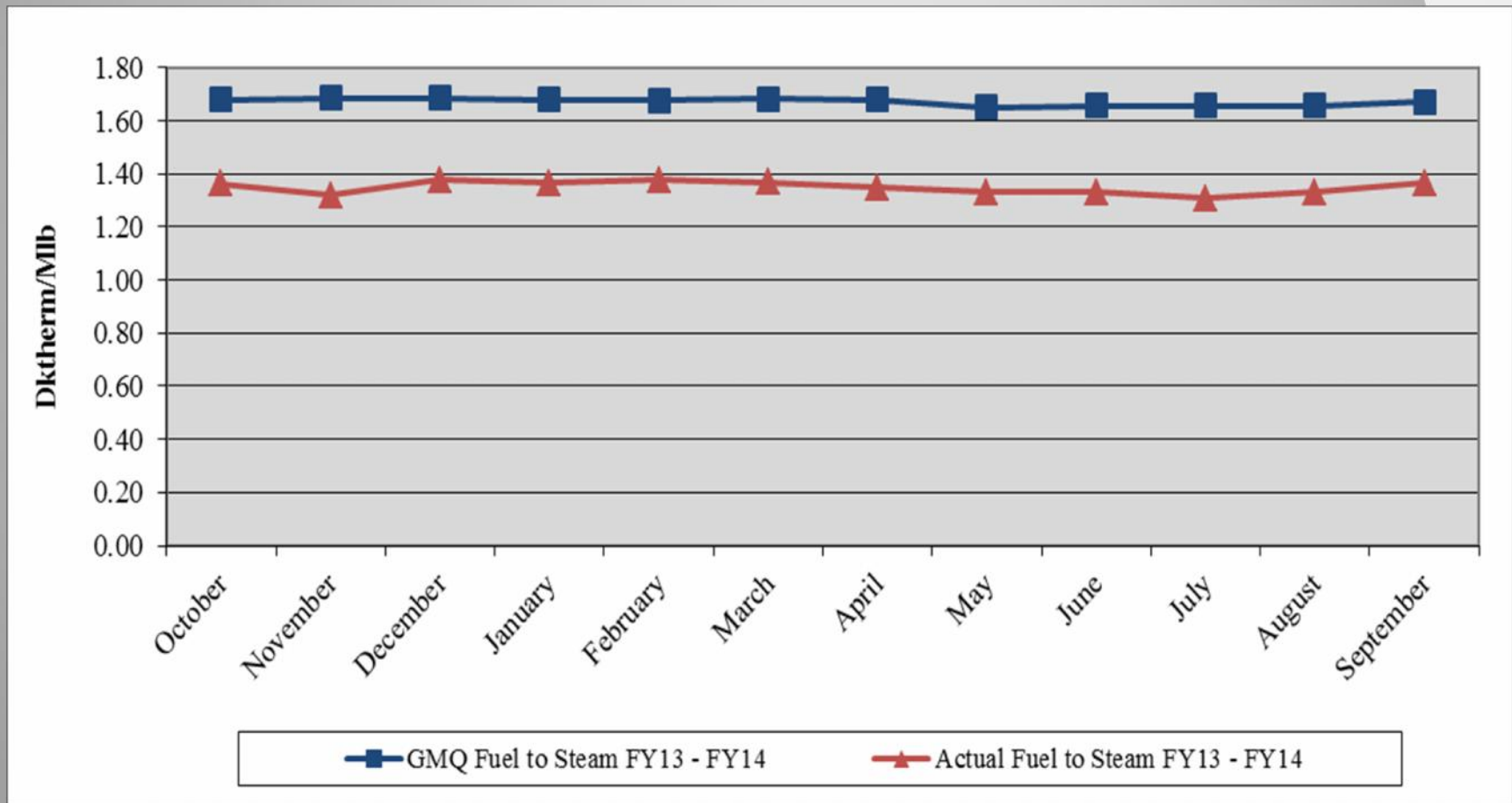


Performance Measurement FY14: Steam Electric Conversion ●



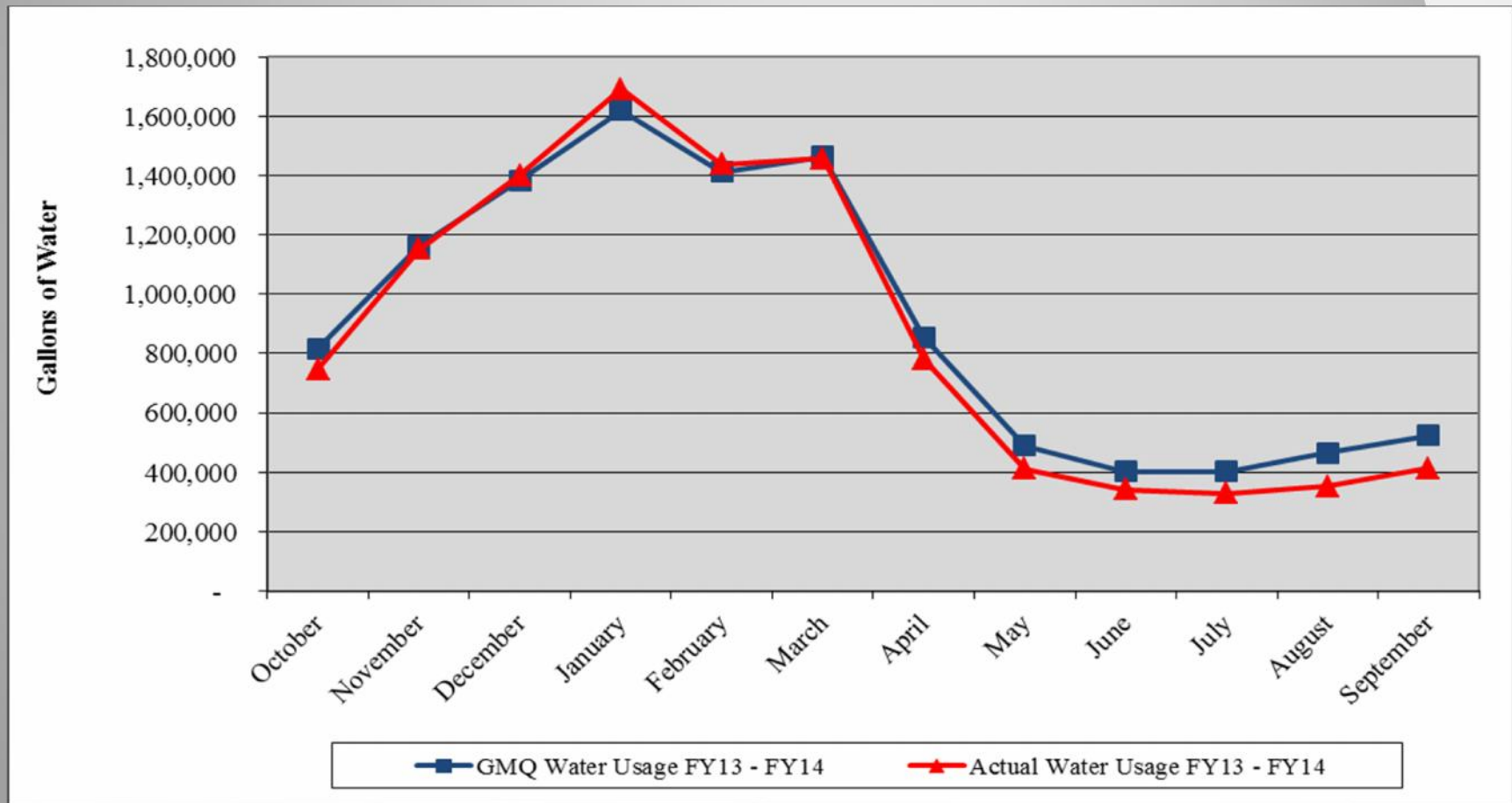


Performance Measurement FY14: Steam Plant Efficiency



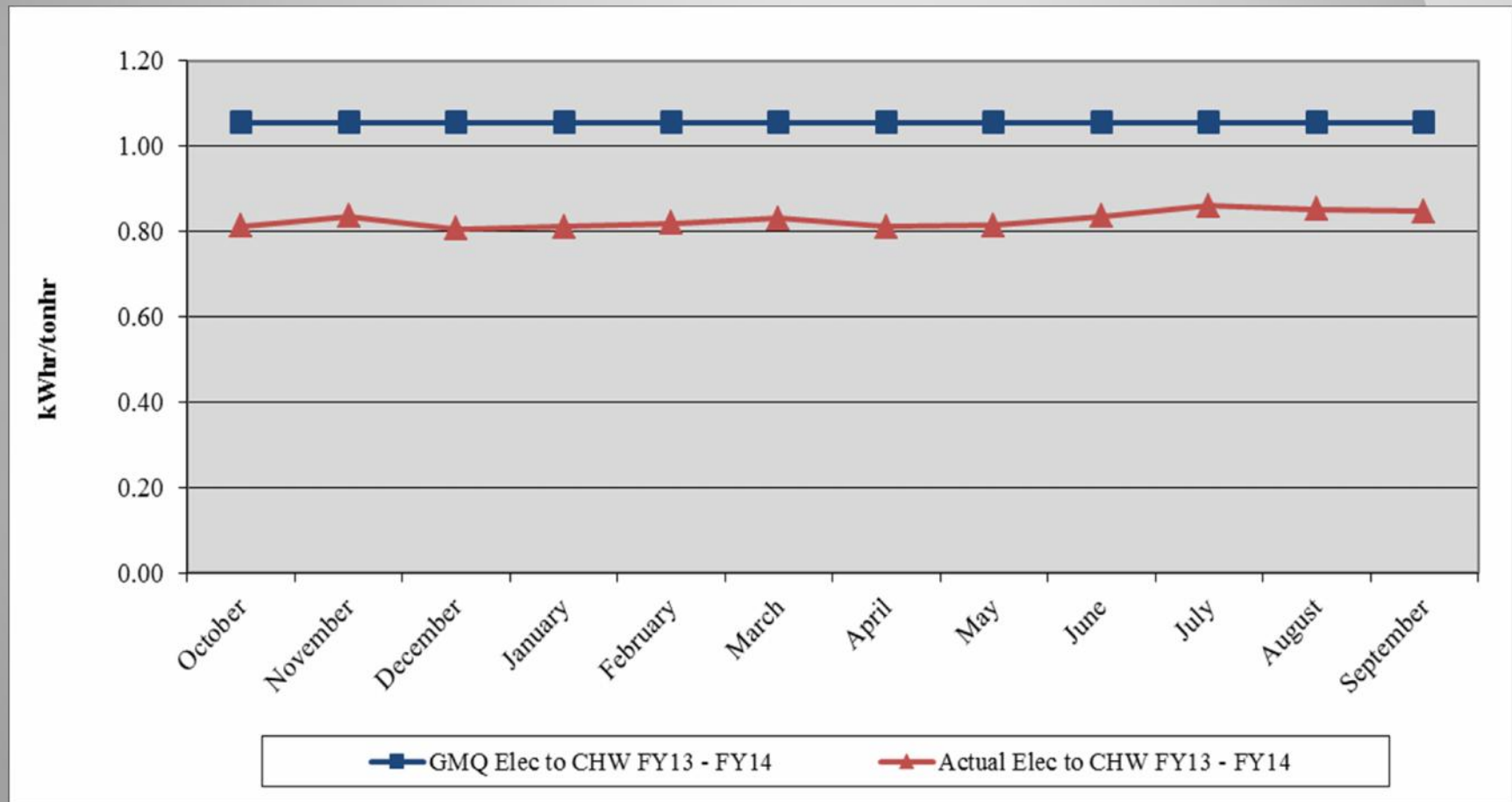


Performance Measurement FY14: Steam Water Conversion



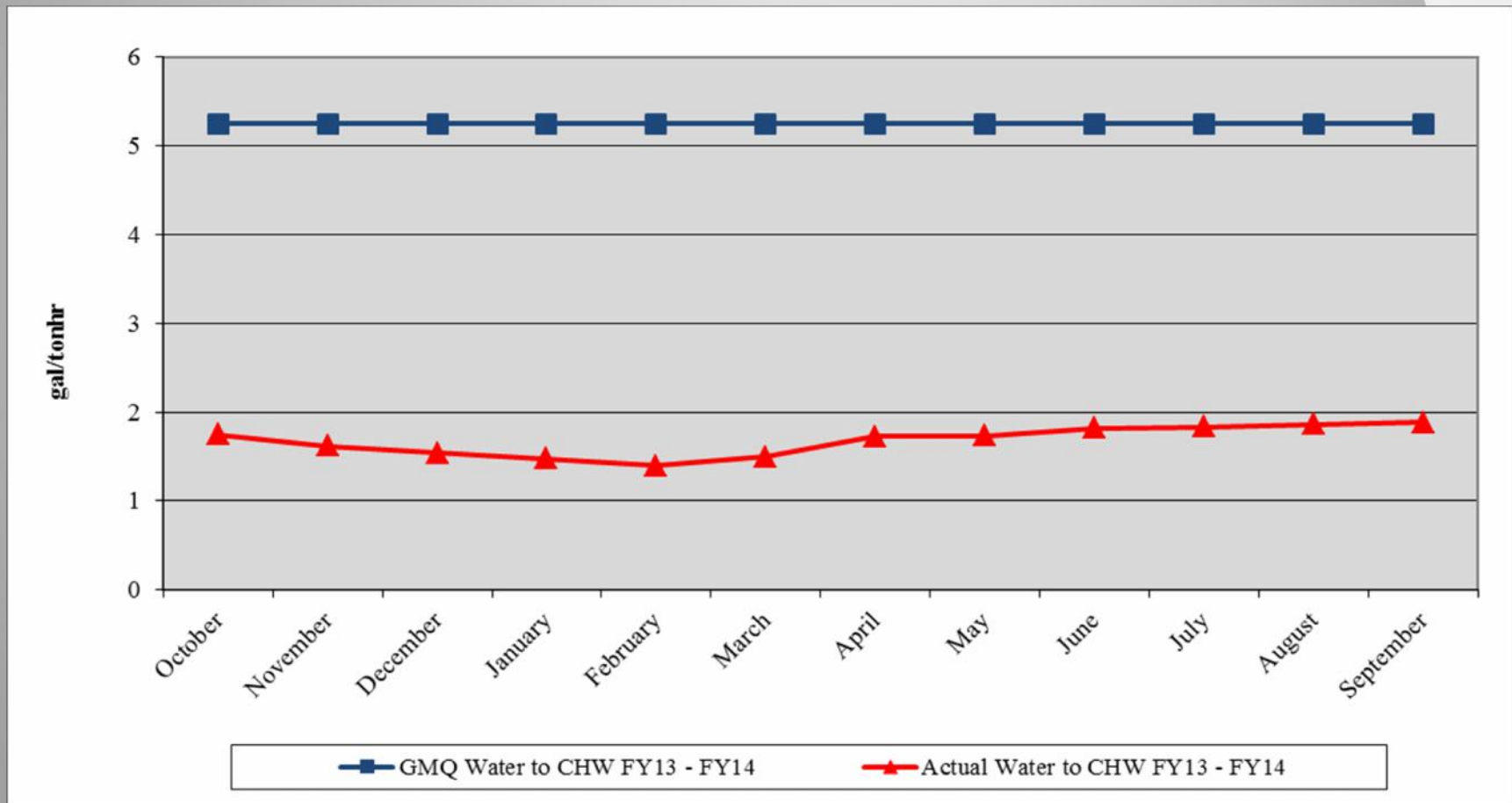


Performance Measurement FY14: CHW Electric Conversion ●





Performance Measurement FY14: CHW Water Conversion ●





Water Treatment

❖ Steam and Condensate ●

- ❖ Corrosion
- ❖ Iron
- ❖ Hardness
- ❖ Chlorine/Sulfite

❖ Condensing Water ●

- ❖ Conductivity
- ❖ Biologicals

❖ Chilled Water ●

- ❖ Hardness
- ❖ Corrosion
- ❖ Biologicals



EGF Walkthrough

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



EDS Walkthrough

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



5. Natural Gas Purchasing

- ❖ Natural Gas Purchasing Review
 - ❖ Table 5: FY13 Gas Spending & Budget Comparison
 - ❖ Figure 5: Actual and Projected Gas Cost Comparison



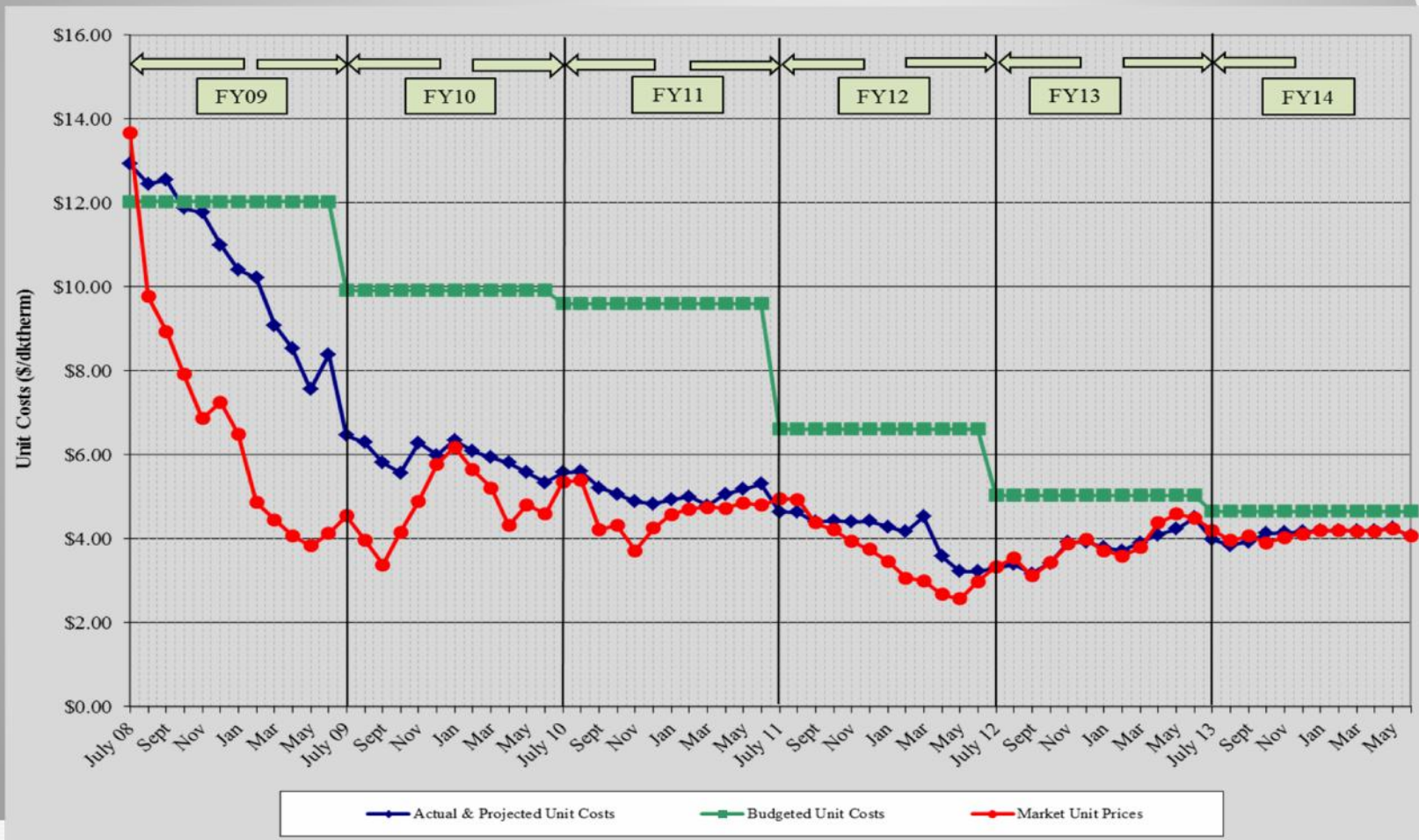
Table 5: FY14 Gas Spending & Budget Comparison

		Actual FY14 To date (Oct 30)	Budget FY14	Percent Difference
Steam Sendout (Mlbs)		62,550	43,522	-43.7%
Fuel Use (Dth) (includes propane)	●	83,408	60,971	-36.8%
Plant Eff (Dth/Mlb)	●	1.333	1.401	4.9%
Total Gas Cost (includes propane)	●	\$368,355	\$284,125	-29.6%
Unit Cost of Fuel (\$/Dth)	●	\$4.416	\$4.660	5.2%

Excludes consultant fees and FEA and budget contingency



Figure 5. Actual and Projected Gas Cost Comparison History





6. FY14 Costs to Date

Item	FY13 Actual	FY14 Budget	FY14 Actual to date	Percent of FY14 Budget
FOC's	\$ 4,401,100	\$ 4,583,500	\$ 1,114,982	24.33%
Pass Throughs				
Non-Energy	\$ 937,672	\$ 1,042,100	\$ 255,139	24.48%
Water/Sewer	\$ 501,903	\$ 714,300	\$ 187,860	26.30%
Natural Gas Base	\$ 2,491,106	\$ 2,512,943	\$ 284,125	11.31%
Natural Gas Contingency	\$ -	\$ 643,157	\$ 88,983	13.84%
Electricity	\$ 5,277,414	\$ 6,633,900	\$ 2,195,220	33.09%
Debt Service	\$ 4,209,145	\$ 5,518,700	\$ 1,123,283	20.35%
Total Expenses	\$ 17,818,340	\$ 21,648,600	\$ 5,249,590	24.25%
Total Revenues	\$ 16,739,403	\$ 19,690,300	\$ 5,217,021	26.50%
Metro Funding Amount	\$ 1,078,937	\$ 1,958,300	\$ 489,575	25.00%



7. FY14 Budget

Item	FY13 Budget	FY14 Budget	Percent Change
FOC's	\$ 4,401,100	\$ 4,583,500	4.14%
Pass Throughs			
Non-Energy	\$ 1,096,170	\$ 1,042,100	-4.93%
Water/Sewer	\$ 616,500	\$ 714,300	15.86%
Natural Gas Base	\$ 2,267,400	\$ 2,512,943	10.83%
Natural Gas Contingency	\$ 917,700	\$ 643,157	-29.92%
Electricity	\$ 5,718,200	\$ 6,633,900	16.01%
Debt Service	\$ 5,165,830	\$ 5,518,700	6.83%
Total Expenses	\$ 20,182,900	\$ 21,648,600	7.26%
Total Revenues	\$ 17,782,100	\$ 19,690,300	10.73%
Metro Funding Amount	\$ 2,358,300	\$ 1,958,300	-16.96%



8. Capital Expenditure Update

	Spent to End of FY13	FY14 Spending	Balance to Date (10/30/13)
R&I Projects	\$2,181,091	\$29,040	\$112,452
49109-2010 Bond	\$1,888,400	\$2,629	\$518,971
49107-Customer Connection Fund	\$5,825,733	\$39,273	\$2,634,995
Total	\$9,895,224	\$70,942	\$3,266,418

Previous Bonds with \$0 Remaining: 2002A, 2005B, 2007 and 2008



Capital Projects Review

Active Capital Projects

- DES 061: MH & Tunnel Steel Corrosion Repair & Prevention – ongoing
- DES 091: TOU and Thermal Storage – developing TOU invoicing changes
- DES 098: Service Connection to Nashville Hyatt Place – complete; Service began during the Quarter – in close-out
- DES-102: Delta T Modifications – schedule to begin in November 2013
- DES-103: Sheraton CHW Modifications – in design



Capital Projects Review

Capital Projects in Close-out

- DES 080: Misc. MH & Tunnel Safety Repairs – closed
- DES 095: MH-B2 Water Infiltration – closed
- DES 100: MH-10 Sump Pump and Roof Replacement – in close-out
- DES 101: MH-1 Abandonment – in close-out



9. Other Board Member Items

10. Adjourn

- *Advisory Board Meeting Schedule*
- FY14 – 2nd Quarter Meeting – February 20, 2014
- FY14 – 3rd Quarter Meeting – May 15, 2014
- FY14 – 4th Quarter Meeting – August 21, 2014
- FY15 – 1st Quarter Meeting – November 20, 2014