



Finance & Administration Committee

Information Item III-A

March 31, 2011

FY2012 Preliminary Subsidy Calculation

Washington Metropolitan Area Transit Authority
Board Action/Information Summary

<input checked="" type="radio"/> Action <input type="radio"/> Information	MEAD Number: 101121	Resolution: <input type="radio"/> Yes <input checked="" type="radio"/> No
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TITLE:

FY2012 Preliminary Subsidy Calculation

PURPOSE:

To provide information to the Board on the FY2012 Preliminary Subsidy Calculation.

DESCRIPTION:

The operating budget subsidy is allocated to the jurisdictional funding partners using subsidy allocation formulas:

1. Rail base subsidy allocation - Allocated based on density weighted population, average weekday ridership, and the number of rail stations by jurisdiction.
2. Rail maximum fare subsidy allocation - Allocates half of the passenger revenue loss if there were no "max fare."
3. Regional bus subsidy allocation - Used for inter-jurisdictional routes. Allocated based on density weighted population and ridership by jurisdiction of residence, and revenue miles and hours per jurisdiction.
4. Non-regional bus subsidy allocation - Allocated directly to the jurisdiction based on the scheduled platform hours and the cost per platform hour, less passenger revenue collected.
5. Paratransit subsidy allocation - Allocated cost of the service less the revenue collected, based on jurisdiction of residence.

The bus, rail, and Access components of the subsidy calculation help ensure fair and equitable funding of Metro services by the jurisdictions.

FUNDING IMPACT:

The final subsidy calculation results in the Board-adopted subsidies for the Operating Budget.	
Project Manager:	Matt Brown

Project Department/Office:	The Office of Management and Budget Services performs the calculation with information from the Bus, Rail, and Access departments.
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RECOMMENDATION:

This is an information item. No Committee or Board action is required.



Washington Metropolitan Area Transit Authority

FY2012 Preliminary Subsidy Calculation

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The Subsidy

- Revenue from passenger fares, advertising, fiber optic leases, joint development, etc. covers 55% of expenses
- The remaining 45% is subsidized by the local governments
- Federal funding supports the capital program, not operating expenses
- The subsidy is “allocated” to each jurisdiction using Board approved formulas

<i>FY2012 Proposed Budget (\$ Millions)</i>	Revenue	Expense	Prev. Main.	Subsidy
	\$807	- \$1,466	- \$31	= \$628



Subsidy Allocation

The Operating Budget is a collection of four mini-budgets called "Modes"



(\$ Millions)	FY2012 Operating Budget	Metrorail	Metrobus Total	Regional Metrobus	Non-Regional Metrobus	MetroAccess
FY2012 Budgeted Revenue	\$807	\$661	\$140	\$119	\$21	\$6
FY2012 Budgeted Expense	\$1,466	\$814	\$533	\$439	\$94	\$120
Preventive Maintenance	\$31	\$20	\$10	\$10	\$0	\$0
FY2012 Estimated Subsidy	<u>\$628</u>	<u>\$132</u>	<u>\$382</u>	<u>\$309</u>	<u>\$73</u>	<u>\$113</u>

Each Mode has its own unique subsidy rules

Definition: Mode, meaning mode of transportation



Subsidy Allocation

Summary: Metrorail, Metrobus, MetroAccess FY2012 Operating Subsidy

(\$ Millions)	Total	Metrorail	Metrobus	Regional	Non-Regional	MetroAccess
District of Columbia	\$235	\$44	\$167	\$133	\$34	\$24
Montgomery County	\$110	\$27	\$55	\$47	\$8	\$28
Prince George's County	\$141	\$24	\$72	\$51	\$21	\$45
Maryland Total	\$251	\$51	\$127	\$98	\$30	\$73
City of Alexandria	\$22	\$6	\$15	\$15	\$0	\$1
Arlington County	\$38	\$12	\$24	\$23	\$1	\$1
City of Fairfax	\$1	\$0	\$1	\$1	\$0	\$0
Fairfax County	\$80	\$19	\$47	\$39	\$9	\$13
City of Falls Church	\$2	\$0	\$1	\$1	\$0	\$0
Virginia Total	\$142	\$38	\$88	\$79	\$10	\$16
Total Subsidy	\$628	\$132	\$382	\$309	\$73	\$113



Schedule for Subsidy Update

- Annual adjustments reflect ridership and service miles and hours changes
- FY2013 Budget – no significant change from FY2012
- FY2014 Budget
 - Census (2010 urbanized area population data released in October 2012)
 - Rail Passenger Survey
 - Dulles extension Phase 1
- FY2015/2016 Budget
 - Rail Passenger Survey
 - Bus Passenger Survey
- FY2017 Budget
 - Dulles extension Phase 2



The Subsidy: Quality Control Improvements

- Changes for FY2012 to help ensure subsidy calculation accuracy:
 - Two separate subsidy formula calculations are completed
 - Performance Office coordination of bus and rail operating groups to standardize processes to improve the reliability and usability of schedule driven formula inputs (e.g., miles and hours)
 - Revised subsidy calculation reflecting budget adjustments to be presented to FA Committee in May



Technical Appendix



Subsidy Allocation: Metrorail

1. Metrorail Base Subsidy Allocation

- This subsidy is allocated to the jurisdictions based on 1/3 equal shares of each jurisdiction's:
 - Density weighted population, by jurisdiction of residence
 - Average weekday ridership, by jurisdiction of residence
 - Number of rail stations, by jurisdiction
- Population and Population density are updated every 10 years – US Census
- Rail station counts change as new stations open for business
- Ridership by jurisdiction of residence is updated periodically using surveys



Subsidy Allocation: Metrorail

1. Metrorail Base Subsidy Allocation

Formula	Pop/Pop Density	Ridership by Jurisd.	Stations by Jurisd.	Allocation	Allocated Base Subsidy (\$ Millions)
District of Columbia	8.6%	10.1%	15.8%	34.5%	\$44
Montgomery County	7.1%	7.0%	4.5%	18.7%	\$24
Prince George's County	<u>6.2%</u>	<u>6.2%</u>	<u>5.6%</u>	<u>18.0%</u>	<u>\$23</u>
Maryland	13.4%	13.3%	10.1%	36.7%	\$47
City of Alexandria	1.7%	1.5%	1.4%	4.6%	\$6
Arlington County	2.3%	3.4%	3.9%	9.6%	\$12
City of Fairfax	0.2%	0.1%	0.0%	0.3%	\$0
Fairfax County	7.1%	4.8%	2.2%	14.1%	\$18
City of Falls Church	<u>0.1%</u>	<u>0.1%</u>	<u>0.0%</u>	<u>0.3%</u>	<u>\$0</u>
Virginia	11.3%	10.0%	7.5%	28.8%	\$36
Total	33.3%	33.3%	33.3%	100.0%	\$127



Subsidy Allocation: Metrorail

2. Metrorail Max Fare Allocation

- Long-distance rail fares are capped at \$5.00.... “Max Fare”
- Mileage tiers for longer-distance travel stop adding to the fare
- This results in passenger revenue loss compared to what the revenue would have been without this cap
- 1/2 this revenue loss is allocated specifically to jurisdictions
- Allocated based on ridership by jurisdiction of residence
- Calculation will be updated with next rail survey

	Max Fare Allocation (\$ Millions)
District of Columbia	\$0.3
Montgomery County	\$3.2
Prince George's County	<u>\$0.8</u>
Maryland	\$4.0
City of Alexandria	\$0.1
Arlington County	\$0.1
City of Fairfax	\$0.0
Fairfax County	\$1.1
City of Falls Church	<u>\$0.0</u>
Virginia	\$1.3
Total	\$5.6



Subsidy Allocation: Metrobus

3. Metrobus Regional Subsidy Allocation

- The subsidy is allocated to the jurisdictions based on equal shares of each jurisdiction's:
 - Density weighted population, by jurisdiction of residence = 25%
 - Ridership, by jurisdiction of residence = 15%
 - Revenue miles per jurisdiction = 35%
 - Revenue hours per jurisdiction = 25%



Subsidy Allocation: Metrobus

3. Metrobus Regional Subsidy Allocation

Formula	Pop/Pop Density	Ridership by Jurisd.	Revenue Miles	Revenue Hours	Allocation	Allocated Subsidy (\$ Millions)
District of Columbia	6.5%	8.1%	15.3%	13.1%	42.9%	\$133
Montgomery County	5.4%	1.7%	4.9%	3.1%	15.1%	\$47
Prince George's County	<u>4.7%</u>	<u>2.7%</u>	<u>5.8%</u>	<u>3.4%</u>	<u>16.5%</u>	<u>\$51</u>
Maryland	10.0%	4.4%	10.8%	6.5%	31.6%	\$98
City of Alexandria	1.3%	0.7%	1.7%	1.1%	4.7%	\$15
Arlington County	1.7%	1.0%	2.9%	2.0%	7.5%	\$23
City of Fairfax	0.1%	0.1%	0.0%	0.0%	0.2%	\$1
Fairfax County	5.3%	0.8%	4.2%	2.3%	12.6%	\$39
City of Falls Church	<u>0.1%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.1%</u>	<u>0.4%</u>	<u>\$1</u>
Virginia	8.5%	2.6%	9.0%	5.4%	25.5%	\$79
Total	25.0%	15.0%	35.0%	25.0%	100.0%	\$309



Subsidy Allocation: Metrobus

3. Metrobus Non-Regional Subsidy Allocation

- Non-regional Metrobus service is operated at the specific request of each individual jurisdiction
 - The subsidy is allocated directly back to each requesting jurisdictions based on:
 - Scheduled platform hours x cost per platform hour; the cost per hour is a marginal cost rate
 - Less passenger revenue collected



Subsidy Allocation: Metrobus

3. Metrobus Non-Regional Subsidy Allocation

	Platform Hours (Annual)	Cost per Platform Hour	Operating Expense (\$ Millions)	Passenger Revenue (\$ Millions)	Subsidy (\$ Millions)
District of Columbia	420,867	\$105.74	\$44.5	\$10.7	\$33.8
Montgomery County	106,654	\$105.74	\$11.3	\$2.8	\$8.5
Prince George's County	253,041	\$105.74	\$26.8	\$5.6	\$21.1
Maryland	359,695		\$38.0	\$8.4	\$29.6
City of Alexandria	5,436	\$105.74	\$0.6	\$0.1	\$0.4
Arlington County	10,051	\$105.74	\$1.1	\$0.4	\$0.7
City of Fairfax		\$105.74	\$0.0		\$0.0
Fairfax County	89,692	\$105.74	\$9.5	\$0.9	\$8.6
City of Falls Church		\$105.74	\$0.0		\$0.0
Virginia	105,179		\$11.1	\$1.4	\$9.7
Total	885,740		\$93.7	\$20.6	\$73.1



Subsidy Allocation: MetroAccess

4. MetroAccess Subsidy Allocation

- The subsidy is allocated to the jurisdictions based on:
 - Cost of the service, less revenue collected
 - By the rider's jurisdiction of residence
 - Allocations are applied to DC / MD / VA based on trips per jurisdiction of residence
 - The VA jurisdictions then have a sub-allocation process based on trip distance



Subsidy Allocation: MetroAccess

4. MetroAccess Subsidy

<u>Jurisdiction:</u>	<u>Expense (\$ Millions)</u>	<u>Revenue (\$ Millions)</u>	<u>Subsidy (\$ Millions)</u>
District of Columbia	\$25.5	\$1.3	\$24.2
Montgomery County	\$29.5	\$1.5	\$28.0
Prince George's County	\$47.7	\$2.5	\$45.2
Northern Virginia	\$16.8	\$0.9	\$16.0
	\$119.6	\$6.3	\$113.3
<u>VA Sub-Allocations</u>	<u>Expense (\$ Millions)</u>	<u>Revenue (\$ Millions)</u>	<u>Subsidy (\$ Millions)</u>
City of Alexandria	\$1.1	\$0.1	\$1.0
Arlington County	\$1.5	\$0.1	\$1.4
City of Fairfax	\$0.3	\$0.0	\$0.2
Fairfax County	\$13.8	\$0.7	\$13.1
City of Falls Church	\$0.1	\$0.0	\$0.1
	\$16.8	\$0.9	\$16.0



Subsidy Allocation

FY2012 Regional Metrobus Revenue Hours by Jurisdiction			
Formula		B=(Ajur/Atot)	C=(B*1/4)
	Revenue Hours	Percent of Total	Formula Weight
District of Columbia	1,444,354	52.41%	13.1%
Montgomery County	342,213	12.42%	3.1%
Prince George's County	370,858	13.46%	3.4%
Maryland	713,071	25.88%	6.5%
City of Alexandria	119,820	4.35%	1.1%
Arlington County	215,440	7.82%	2.0%
City of Fairfax	925	0.03%	0.0%
Fairfax County	251,728	9.13%	2.3%
City of Falls Church	10,438	0.38%	0.1%
Virginia	598,351	21.71%	5.4%
Total	2,755,777	100.00%	25.0%



Subsidy Allocation

FY2012 Regional Metrobus Revenue Miles by Jurisdiction			
Formula		B=(Ajur/Atot)	C=(B*7/20)
	Revenue Miles	Percent of Total	Formula Weight
District of Columbia	12,116,847	43.6%	15.3%
Montgomery County	3,911,137	14.1%	4.9%
Prince George's County	4,626,754	16.7%	5.8%
Maryland	8,537,891	30.7%	10.8%
City of Alexandria	1,345,233	4.8%	1.7%
Arlington County	2,327,516	8.4%	2.9%
City of Fairfax	11,595	0.0%	0.0%
Fairfax County	3,335,056	12.0%	4.2%
City of Falls Church	109,212	0.4%	0.1%
Virginia	7,128,612	25.7%	9.0%
Total	27,783,350	100.0%	35.0%



Subsidy Allocation

FY2012 Regional Metrobus Ridership by Jurisdiction of Residence			
Formula	A	B=(A _{jur} /A _{tot})	C=(B*3/20)
	Ridership by Jurisdiction of Residence	Percent of Total	Formula Weight
District of Columbia	177,384	53.8%	8.1%
Montgomery County	36,931	11.2%	1.7%
Prince George's County	58,881	17.9%	2.7%
Maryland	95,811	29.1%	4.4%
City of Alexandria	14,291	4.3%	0.7%
Arlington County	21,167	6.4%	1.0%
City of Fairfax	1,292	0.4%	0.1%
Fairfax County	16,721	5.1%	0.8%
City of Falls Church	2,804	0.9%	0.1%
Virginia	56,275	17.1%	2.6%
Total	329,470	100.0%	15.0%



Subsidy Allocation

FY2012 Metrorail Ridership by Jurisdiction of Residence			
Formula	A	B=(A _{jur} /A _{tot})	C=(B*1/3)
	Ridership by Jurisdiction of Residence	Percent of Total	Formula Weight
District of Columbia	199,998	30.2%	10.1%
Montgomery County	139,808	21.1%	7.0%
Prince George's County	123,530	18.7%	6.2%
Maryland	263,338	39.8%	13.3%
City of Alexandria	29,805	4.5%	1.5%
Arlington County	67,192	10.2%	3.4%
City of Fairfax	2,522	0.4%	0.1%
Fairfax County	95,837	14.5%	4.8%
City of Falls Church	2,964	0.4%	0.1%
Virginia	198,321	30.0%	10.0%
Total	661,656	100.0%	33.3%



Subsidy Allocation

FY2012 Metrorail Station Assignments by Jurisdiction

Formula	A	B=(A _{jur} /A _{tot})	C=(B*1/3)
	Metrorail Stations by Jurisdiction	Percent of Total	Formula Weight
District of Columbia	40.3	47.4%	15.8%
Montgomery County	11.5	13.5%	4.5%
Prince George's County	14.2	16.7%	5.6%
Maryland	25.7	30.3%	10.1%
City of Alexandria	3.5	4.1%	1.4%
Arlington County	10.0	11.8%	3.9%
City of Fairfax	0.0	0.0%	0.0%
Fairfax County	5.5	6.5%	2.2%
City of Falls Church	0.0	0.0%	0.0%
Virginia	19.0	22.4%	7.5%
Total	85.0	100.0%	33.3%



Subsidy Allocation

Population & Population Density from 2000 US Census

Formula	A	B	C=(B/A)	D=(B*C)/1M	E=(Bjur/Btot)	F=(Djur/Dtot)	G=(E+F)/2	H=(G*1/3)	I=(G*1/4)
Jurisdiction	UZA Land Area sq/mil. 2000 Cen.	2000 Pop of UZA 2001 Cen.	Pop. Desity UZA	Density Wght. Pop Millions	UZA Pop. Dist	Density Wght. Pop Dist	Pop/Pop Density Dist	Rail Formula Weight	Bus Formula Weight
District of Columbia	61	572,059	9,326	5,335	16.3%	35.5%	25.9%	8.6%	6.5%
Maryland	518	1,624,290	3,134	5,090	46.4%	33.9%	40.1%	13.4%	10.0%
Virginia	370	1,305,693	3,526	4,604	37.3%	30.6%	34.0%	11.3%	8.5%
								33.3%	25.0%
Montgomery County	254	843,747	3,321	2,802	51.9%	54.9%	53.4%	7.1%	5.4%
Prince George's County	264	780,543	2,954	2,306	48.1%	45.1%	46.6%	6.2%	4.7%
City of Alexandria	15	128,283	8,440	1,083	9.8%	19.9%	14.9%	1.7%	1.3%
Arlington County	26	189,453	7,304	1,384	14.5%	25.4%	20.0%	2.3%	1.7%
City of Fairfax	6	21,498	3,490	75	1.6%	1.4%	1.5%	0.2%	0.1%
Fairfax County	321	956,082	2,978	2,848	73.2%	52.3%	62.8%	7.1%	5.3%
City of Falls Church	2	10,377	5,189	54	0.8%	1.0%	0.9%	0.1%	0.1%