

BOARD OF SUPERVISORS WORK SESSION

GOVERNMENT CENTER BOARD ROOM

JUNE 23, 2009 - 4 P.M.

A. Call to Order

B. Roll Call

C. Board Discussions

1. Impervious Cover Update
2. Williamsburg Area Transit Authority

D. Adjournment

MEMORANDUM

DATE: June 23, 2009

TO: The Board of Supervisors

FROM: Michael D. Woolson, Senior Watershed Planner

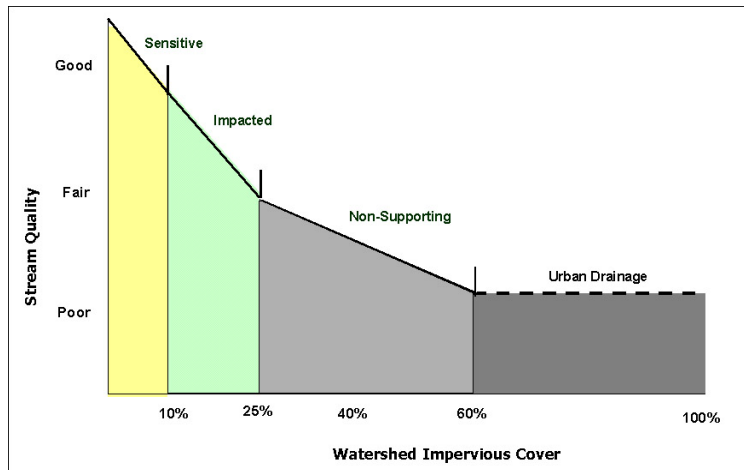
SUBJECT: Updated Impervious Cover Estimates for Powhatan and Yarmouth Creek Watersheds

The impervious cover estimates for Powhatan and Yarmouth Creeks have been updated using a variety of sources including aerial photography; information from Real Estate Assessments, Planning, Stormwater, and Environmental Divisions; the Center for Watershed Protection (CWP) Powhatan Creek and Yarmouth Creek reports; and the Williamsburg Environmental Group Powhatan Creek Floodplain Study. In addition, staff analyzed the projected impervious cover figures at build-out based upon the underlying Comprehensive Plan land use designation instead of the by-right density. The latter was completed by CWP in 2001.

Impervious Cover Model

Stream research generally indicates that certain zones of stream quality exist, most notably at 11 percent impervious cover, where sensitive stream elements are lost from the system and a second threshold appearing at around 25 percent impervious cover, where indicators of stream quality consistently shift to a poor condition (e.g., diminished aquatic diversity, water quality, and habitat scores). The model classifies streams into one of three categories: 1) sensitive, 2) impacted, and 3) non-supporting. Each stream category can be expected to have unique characteristics as follows:

- 1) Sensitive Streams. These streams typically have a watershed impervious cover of zero to 10 percent. Consequently, sensitive streams are of high quality and are typified by stable channels, excellent habitat structure, good to excellent water quality, and diverse communities of both fish and aquatic insects. Since impervious cover is so low, it does not experience the hydrological changes that accompany urbanization.
- 2) Impacted Streams. Streams in this category possess a watershed impervious cover ranging from 11 to 25 percent and show clear signs of degradation due to watershed urbanization.
- 3) Non-Supporting Streams. Once watershed impervious cover exceeds 25 percent, stream quality crosses a second threshold. Streams in this category essentially become conduits for conveying stormwater flows and can no longer support a diverse stream community.



Impervious Cover Estimates

The sub-watersheds and baseline percentages for each creek were determined from the study for each applicable creek. The current (2007 data) percentages for Powhatan Creek were taken from the “Powhatan Creek Floodplain Study” by Williamsburg Environmental Group, July 2008, as were the projected percentages. The current (2007 data) percentages for Yarmouth Creek were arrived at through a comparative analysis between the baseline and 2007 aerial photography. The projected percentages for Yarmouth Creek were also arrived at through a comparative analysis between the current built-on parcels and the underlying land use designations. The impervious cover estimates for both creeks are as follows:

Analysis – Powhatan Creek

Current Powhatan Creek impervious cover numbers increases in seven categories over the baseline numbers established in 2001. Powhatan Creek is entirely contained within the Primary Service Area (PSA) and has seen growth during the last seven years, including New Town, Prime Outlets expansion, Warhill, and new residential communities.

Using the Impervious Cover Model to determine overall watershed health, there were eight sub-watersheds that were classified as “*Sensitive*” with only three sub-watersheds that were classified as “*Impacted*” in the baseline study. Under current conditions, four sub-watersheds would remain “*Sensitive*” and the remaining sub-watersheds are classified as “*Impacted*.” Under the projected build-out scenario, one sub-watershed would remain “*Sensitive*” and eight would be “*Impacted*” and only two would be classified as “*Non-Supporting*.” The sub-watershed that will see the least amount of change is sub-watershed 201 while the one that will see the greatest amount is sub-watershed 208.

Powhatan Creek

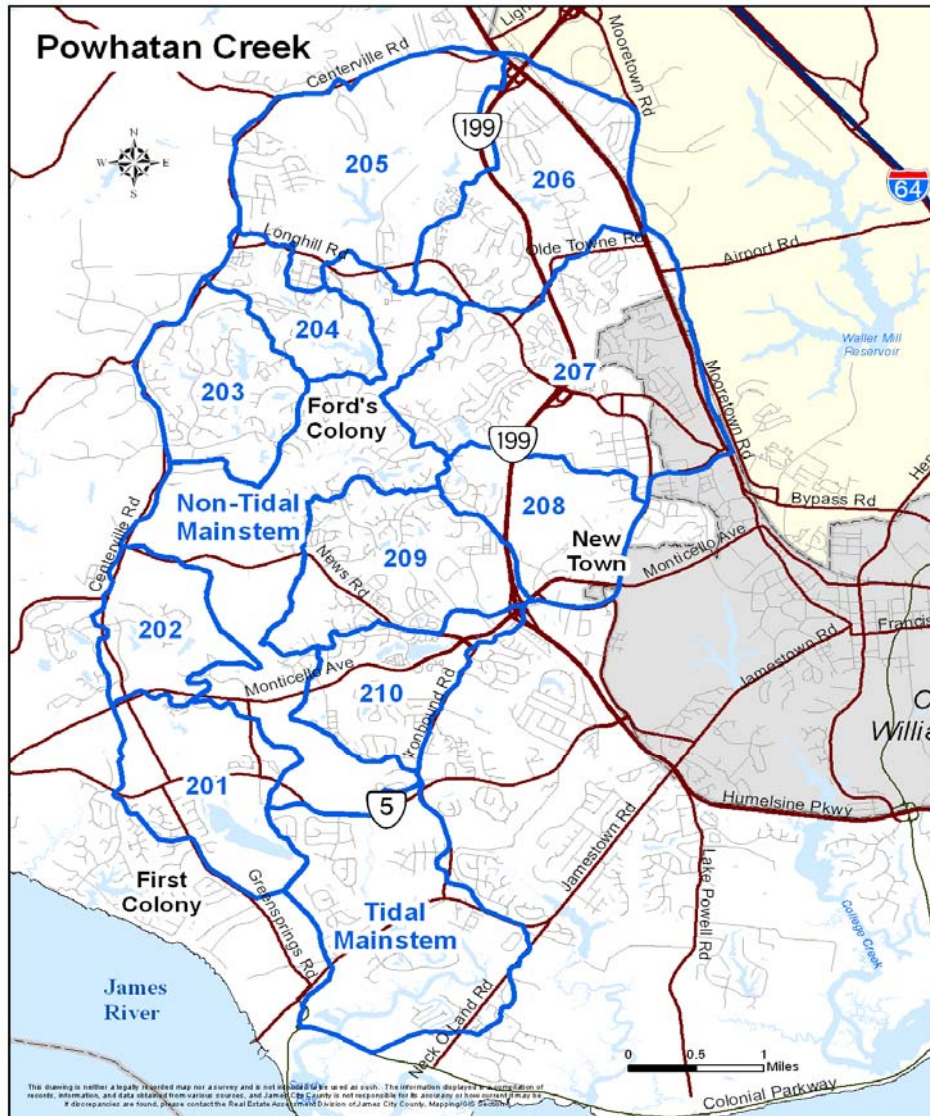
Sub-watershed	CWP Baseline (%)	Current (%)	Projected (%)
201	6.8	8.31	8.31
202	6.4	6.63	14.87
203	10.5	16.05	16.60
204	10.0	18.88	22.10
205	6.4	9.45	19.06
206	16.9	20.78	21.30
207	16.4	24.64	29.30
208	5.8	14.19	27.13

Updated Impervious Cover Estimates for Powhatan and Yarmouth Creek Watersheds

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209	5.3	16.4	21.88
210	18.6	22.63	23.67
Mainstems	7.9	9.06	12.51



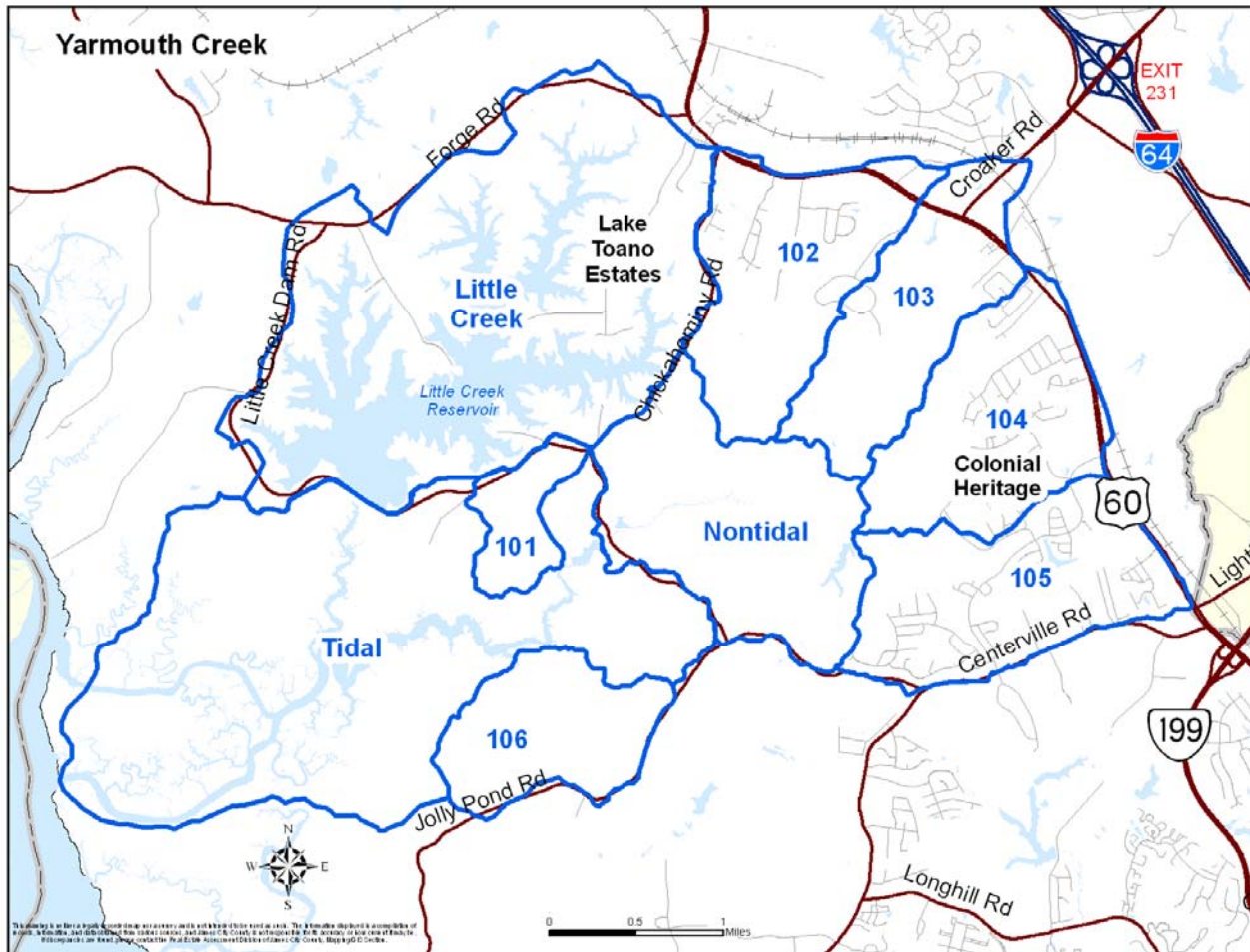
Analysis – Yarmouth Creek

Current Yarmouth Creek impervious cover numbers increased only in one category: Sub-Watershed No. 104 over the baseline numbers established in 2003. Portions of Sub-Watershed Nos. 102, 103, 104, and 105 that have increased slightly are within the PSA and have seen growth during the past five years, including Colonial Heritage, Liberty Crossing, and Walnut Grove.

Again, using the Impervious Cover Model to determine overall watershed health, the entire watershed was classified as “Sensitive” in the baseline study. Under current conditions, as mentioned previously, only one of the sub-watershed now moves into the “Impacted” classification. In the projected build-out scenario, there are three sub-watersheds that would be classified as “Impacted” and one that would be classified as “Non-Supporting” while the remaining watersheds remain “Sensitive.” The sub-watershed that will see the least amount of change is the tidal segment while the one that will see the greatest amount of change is sub-watershed 105.

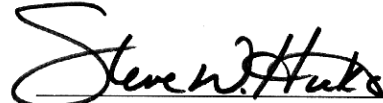
Yarmouth Creek

Sub-watershed	CWP Baseline (%)	Current (%)	Projected (%)
101	2.2	6.29	8.70
102	7.3	7.80	17.80
103	5.1	6.30	22.00
104	9.0	14.00	19.50
105	5.5	9.60	26.90
106	0.4	0.50	8.70
Non-tidal	1.1	1.11	8.50
Tidal	0.3	0.34	5.00
Little Creek	2.0	2.20	7.30



Michael D. Woolson

CONCUR:

A handwritten signature in black ink, reading "Steven W. Hicks". The signature is written in a cursive style with a large initial "S".

Steven W. Hicks

MDW/gb
WtrshedsCover_mem

Williamsburg Area Transit Authority

James City County Board of Supervisors
Work Session
June 23, 2009

WAT Vision Statement

Williamsburg Area Transport will become the transportation option of choice for people who live, work and visit the Williamsburg Area.

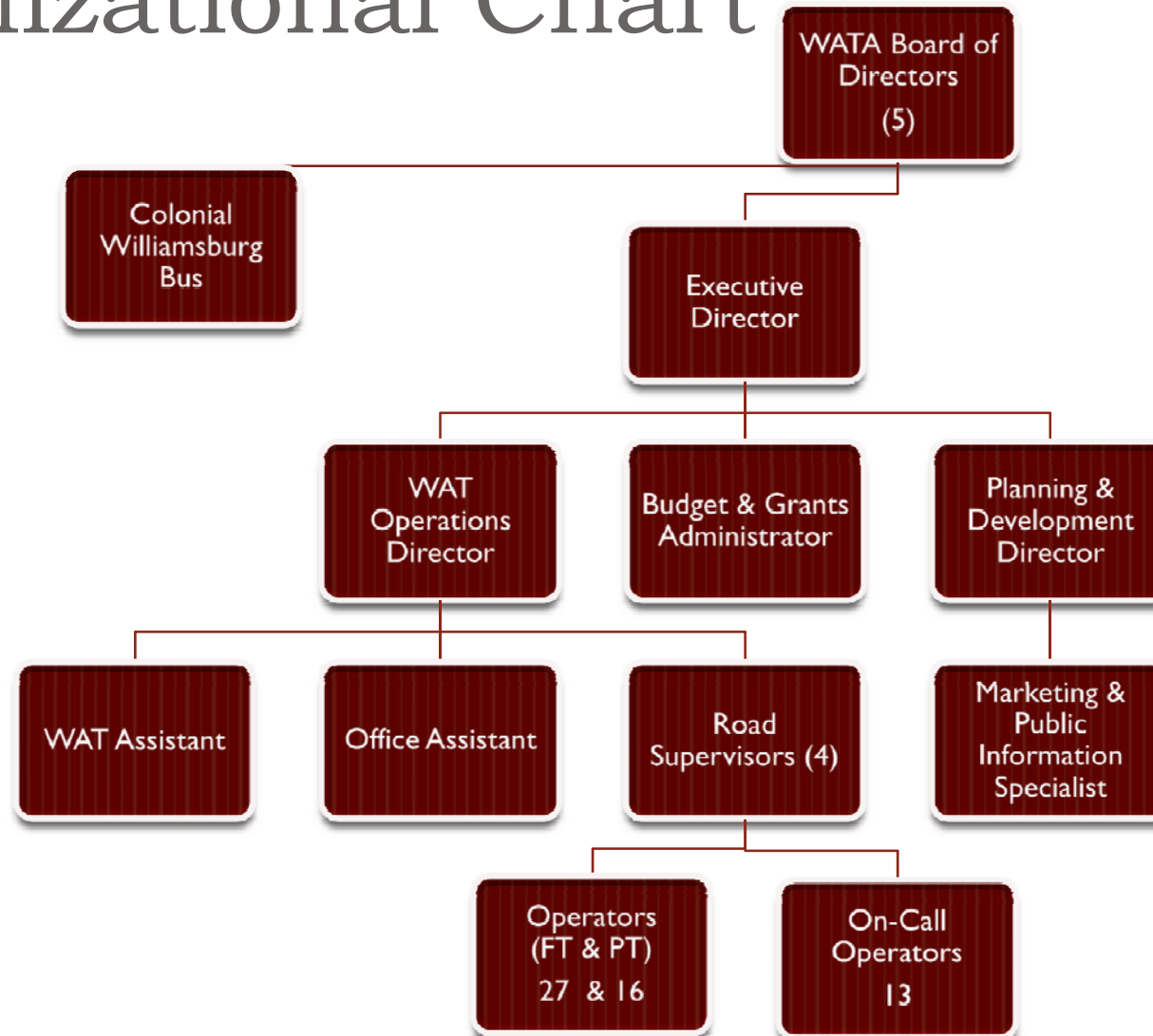
The Transit Authority: Status

- First meeting was August 28, 2008;
- Jodi Miller, City of Williamsburg Assistant City Manager was elected the First Chair;
- The Board meets monthly as a public body.
- Transition under way for employees from County to Authority with benefits remaining the same.
- Much is accomplished already; WATA has own Tax ID, EIN, Insurance has switched over.
- James City County Treasurer is fiscal agent and JCC is assisting with Human Resources.

WATA Strategic Planning

- Board met November 6 to draft a Strategic Plan and approved last month including final action plan;
- Developed goals in line with mission to provide safe, efficient, and accessible public transit to residents and visitors in the Williamsburg Area;
- Strategies and accompanying action plan are in line with Rider Profile as collected by WATA Consultant KFH, Inc. Rider surveys were collected in April and July of 2008.

Organizational Chart



WATA Partners: Status

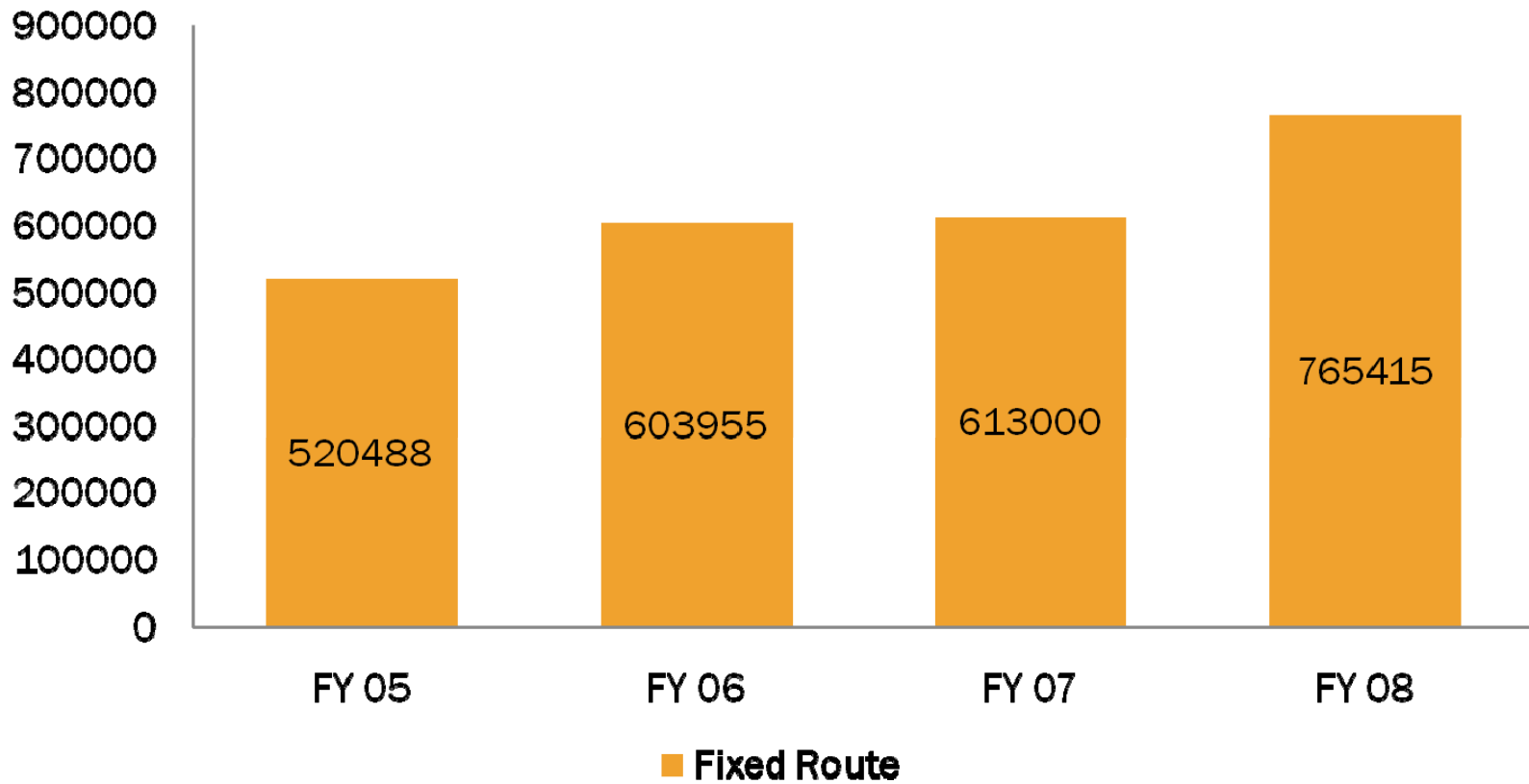
- Colonial Williamsburg: Full voting member of the WATA Board with a purchased transportation agreement for services in addition to a bus lease agreement. Their visitor based transit system is open to the public and now funded in part with public funds administered by WATA. The CNG buses are owned by WATA.
- The College of William & Mary contracts with WATA for service to operate the Green Line.

Benefits for Creating WATA

- In FY 09 inclusion of CW brought extra \$465,000 to WATA of which 35% goes to CW.
- In FY 09 additional \$2 million for CW Bus for CNG equipment.
- Improved regional cooperation and planning. Voting member of MPO.
- Now a seat at the table in the governing body for all partners.



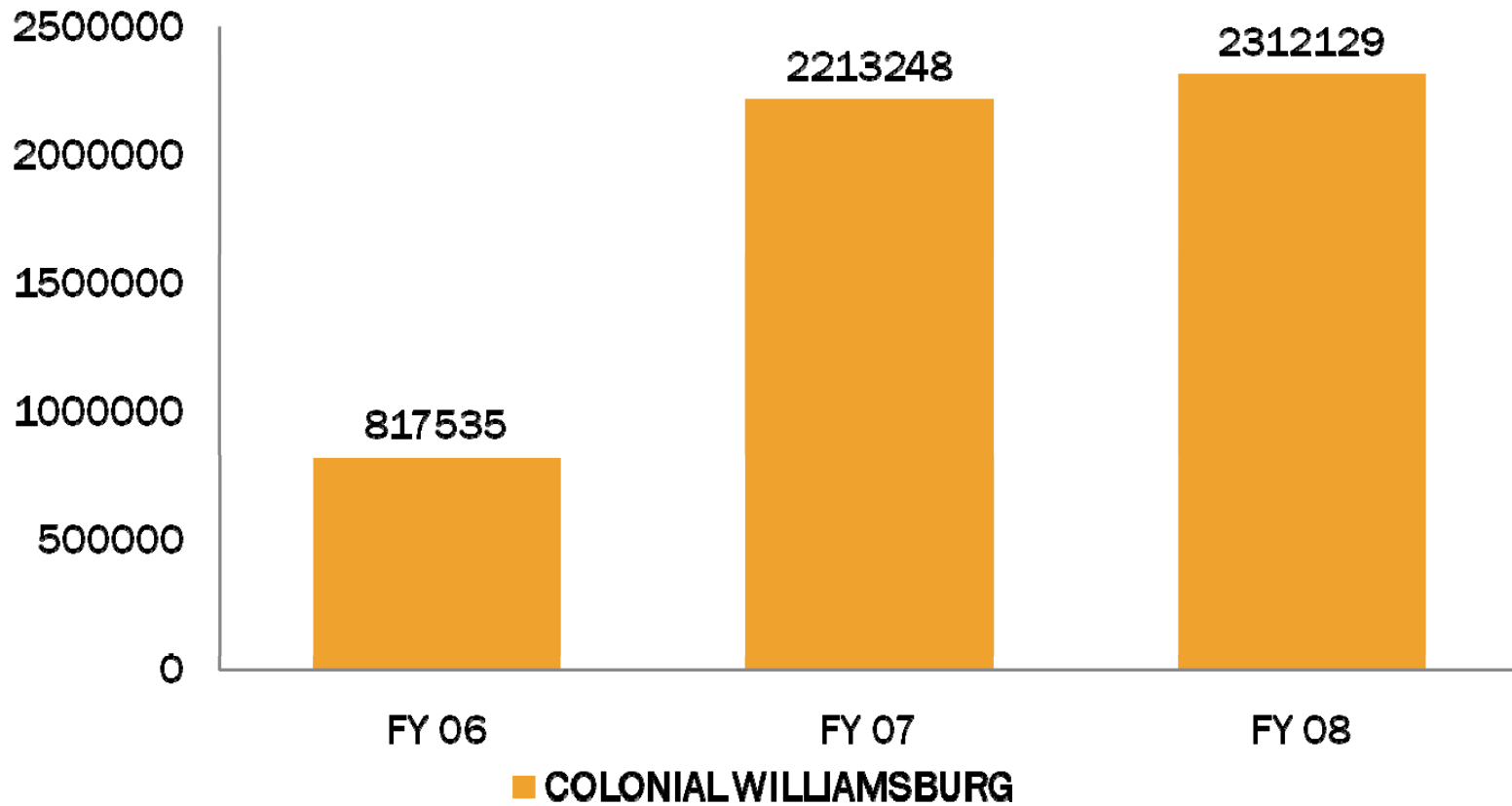
RIDERSHIP





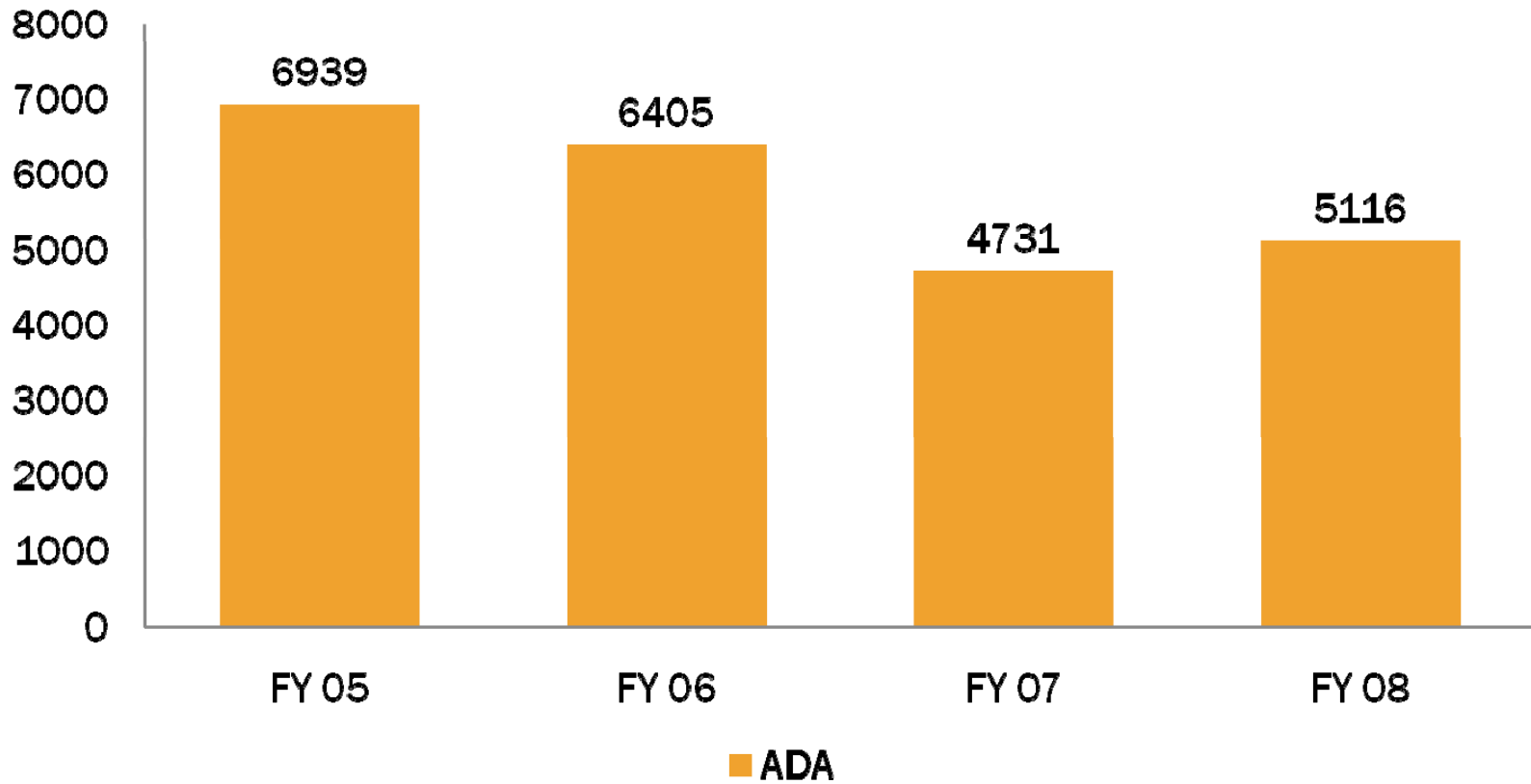
RIDERSHIP:

CW BEGAN REPORTING CY05





RIDERSHIP





Service Improvements: Sunday

This is a picture of the first bus leaving out of the Williamsburg Transportation Center on Nov. 23, 2008. Sunday Service is now part of our regular operating schedule and funding is approved for a three-year trial.



Service Frequency

Current frequency is one hour for entire system.

Plans are to implement half hour service on two trunk lines and additional seasonal lines in April 2009.

Funding is available for three years through CMAQ (Congestion Mitigation Air Quality) funds.



Trolley-Bus

Funds have been acquired to purchase three trolley-buses to serve a loop shuttle between Merchants Square/High Street/ New Town. Our purchased trolleys will be here in late 2009, we are looking at leased units in the interim.

Summary of KFH Rider Profile

- Riders generally use WAT for their daily needs;
- Drivers are courteous, buses are clean and fare is affordable;
- April and July surveys were large samples giving a good indication of system profile;
- Riders requested Sunday service, better on-time performance, longer and more frequent service, and service to Jamestown area.



Bus Shelters & Stops

WATA has entered into agreement with firm for bus shelter cleaning. It is important not only to have buses clean on the inside, but stops and shelters well maintained.

Federal Funding

- Awaiting new authorization of transportation funds, until then working off of continuing resolution;
- Economic Stimulus package, WATA has projects ready to go. We will be working with MPO and State to assure our projects are in the package.
- Federal funding is our base funding and is stable year to year. Federal funding includes the annual urban allocation, rural funding, Urban Area Security, planning, training and travel reimbursements and special allocations (earmarks).

Commonwealth Funding

- First time in FY 2009 budgeted funds had to be returned to state.
- Funding for FY 2010 includes 11.5% reduction.
- Declining fuel prices have offset cuts somewhat in current budget year.
- Long term scenario is somewhat better, merging with CW and expansion returns more funds to area.
- State matches federal funds, but special project funds are difficult to obtain from Richmond in current environment.

Local Revenues

- With the Farebox we currently are looking at alternatives to the WATA all-day pass which is currently \$1.50. This would include weekly and monthly passes.
- Exploring limited advertising on buses for revenue and other new ways to raise advertising dollars including sponsorships.
- All efforts to keep local government shares level leveraging federal and state dollars.



Other Improvements

In 2008 service was added to Stonehouse, frequency improved on the Purple Route, added service to Marquis in York County, hubs in New Town and Williamsburg Outlet Mall were created. Plus in 2008 WAT added 6 new buses to the fleet in anticipation of the new services and routes.

Other Changes / Studies on the Way

- Transit Advisory Board to be established with Citizens and Stakeholders.
- Administrative and Customer Service Center.
- Transit Development Plan Underway; new routes considered for 199 (JCCGC-Quarterpath) and Jamestown Corridors.
- Feasibility Study to look at Continued Contracting of Maintenance and Leasing of Facilities.

Conclusion

- WATA is a new organization and will continue to grow and look for new opportunities with partners;
- A model transit authority others already are looking toward;
- Expansion opportunities include New Kent, Gloucester, more connections in Newport News;
- Transit should connect with bicycle, pedestrian, land use.
- Must lead in environmental consciousness of awareness of public transportation in the “green revolution”.