Financial Assumptions and Cash Management Study

Prepared for the Joint Transportation Committee, Washington State Legislature

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Public Financial Management

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1. Summary

This report provides an independent evaluation of the bond financing assumptions used in the 16-Year Transportation Financial Plan and corresponding Legislative, Office of Financial Management (OFM), and Department of Transportation (WSDOT) budget and debt models, as well as WSDOT's cash management practices as they relate to bond sales, capital spending, debt service withholding and fund balances.

This report, where appropriate, makes recommendations regarding changes in assumptions that are more aligned with best-practices, and changes in practices that can result in a more effective use of budgeted and planned transportation cash and bond proceeds.

1.1. Findings and Recommendations

The 16-Year Transportation Financial Plan generally uses reasonable bond financing assumptions that are consistent with those used by other states and forecasts of major financial institutions. Its bond withholding assumption attempts to adhere to existing legal requirements and is a prudent way to ensure debt service is paid.

WSDOT employs cash management practices that are similar to those of other state governments; however, WSDOT has continued to experience significant capital budget variances and substantially larger-than-expected cash balances, which may have resulted in the issuance of debt earlier than it is needed, the accrual of attendant interest cost, and the diversion of resources from other priorities.

This report attempts to identify strategies that have the potential to reduce the budgeted and planned transportation-related net interest cost and cash balances to a level that is more in-line with expectations.

The major findings and recommendations of this study are summarized below.

Summary of Findings and Recommendations	
Finding 2.1	The Legislature's lower interest rate assumptions that have been used beginning in 2008 (and subsequently adopted by OFM and WSDOT) are similar to those used by other state forecasting entities.
Finding 2.2	While no interest rate forecast has been shown to be an accurate predictor, the base interest rate forecast that OFM/WSDOT and the Legislature rely upon (Global Insight's BBI forecast) is at least consistent with the interest rate forecasts from major financial institutions.
Recommendation 2.1	The Legislature's lower interest rate assumption that has been used beginning in 2008 (and subsequently adopted by OFM and WSDOT), which adds 29 basis points to the Global Insight BBI forecast, appears reasonable and is not overly aggressive, as the average interest rate on appropriate State MVFT bonds has been just 5 basis points higher than BBI over the last three years, and we do not recommend a change to the assumption.
Recommendation 2.2	The Legislature should continue to monitor the relationship between future State MVFT bond issues (new-money, non-AMT tax-exempt, current interest bonds) and the BBI, and revisit the Legislature's interest rate assumption in the event the TIC exceeds the BBI by more than 29 basis points. The Legislature should consult with the OST, who can confer with its financial advisors and bond underwriters, to identify and evaluate any credit or bond market changes that caused the increased spread to BBI.
Recommendation 2.3	The Legislature and OFM/WSDOT should continue to use the Legislature's assumption for future bond sales costs of 0.51% of the principal amount for all projected bond sales, as this percentage is much closer to the amount paid on historical State bond issues and the nationwide average underwriter's spread.
Recommendation 2.4	The Legislature should continue to monitor the bond sales costs for future State MVFT bond issues (new-money, non-AMT tax-exempt, current interest bonds) and revisit the Legislature's assumption in the event actual bond sales costs exceed 0.51% of the principal amount. The Legislature should consult with the OST, who can confer with its financial advisors and bond underwriters, to identify and evaluate any credit or bond market changes that caused the increased bond sales costs.
Recommendation 2.5	WSDOT should request that the Office of the State Treasurer adjust the par amount of bonds offered for sale in order to more precisely target the amount of bond proceeds that are needed and offset any bond premium or discount.

Summary of Findings and Recommendations	
Recommendation 2.6	WSDOT should continue its practice of monthly withholding and transferring approximately 1/6th of the upcoming semiannual debt service payment to the relevant debt service fund. WSDOT should adjust the amount transferred so that the balance in the relevant debt service fund (after the transfer for that month is made) is approximately equal to, but not less than, the semiannual debt service payment becoming due in the following month. The WSDOT budget for debt service should be equal to the amount expected to be withheld. The WSDOT supplemental budget for debt service should reflect any changes in the bond issue amounts from the original budget.
Recommendation 2.7	WSDOT should not change its debt service withholding practice unless the State identifies the specific legal restrictions for debt service withholding and WSDOT prepares an alternative funding plan for debt service. WSDOT and the Legislature should confer with the OST, who may consult with its bond counsel, prior to making any changes to the debt service withholding practice.
Recommendation 2.8	WSDOT should eliminate the task of manually determining monthly debt service withholding amounts for years beyond the current budget biennium, as this information has limited benefit given the financial planning models use annual or biennial cash flows.
Recommendation 3.1	OFM/WSDOT and the Legislature should work together to determine minimum fund balances for the WSDOT administered funds. The minimum fund balances should be the amount needed, along with other WSDOT revenues, to fund fixed costs and high-priority expenditures after a downturn in major revenues, consideration of the potential to delay or eliminate certain capital and operating costs, and accessing any additional sources of liquidity.
Recommendation 3.2	WSDOT should move the "25th month" of capital improvements expenditures from its monthly plan and its biennial budget into the following biennium, as the actual outlay of cash will occur in the following fiscal year.
Recommendation 3.3	WSDOT should implement a formal and well-defined process of monitoring and measuring its budgeted and actual capital expenditures in an attempt to improve its budgetary performance and more efficiently allocate and utilize scarce resources.
Recommendation 3.4	WSDOT should exclude any accrued "25th month" capital expenditures when determining the amount of its bond sale request. WSDOT should also reduce its initial bond sale request if actual and projected bond funded expenditures are lower than those estimated at the time of the initial request.
Recommendation 3.5	WSDOT should develop estimates of interest earnings for its various funds that are dependent upon the respective fund balance and an assumed interest earnings rate.

1.2. Acknowledgements

The information and findings included in this report are based on the input and guidance of several State of Washington staff, including Jeff Caldwell of WSDOT, David Ward of

the Senate Transportation Committee, Svein Braseth and Doug Extine of the Office of the State Treasurer, Jerry Long of the House Transportation Committee, Erik Hansen and Robin Rettew of the OFM, and David Forte of the Joint Transportation Committee.

2. Financial Plan Bond Financing Assumptions

This section evaluates the major bond financing assumptions used in the 16-Year Transportation Financial Plan by both OFM/WSDOT's and the Legislature's budget models, with a focus on the interest rate and debt withholding assumptions. The interest rate evaluation compares the OFM/WSDOT assumptions to those of other state DOTs and the underlying interest rate forecast (which is prepared by a private firm) to the forecasts of other financial institutions. The evaluation of the bond withholding assumption identifies the parameters that mandate the withholding of revenues and compares current WSDOT practices to financial management best-practices.

2.1. Description of the 16-Year Financial Plan

The 16-Year Transportation Financial Plan is the long-term funding plan prepared by OFM/WSDOT for the State's transportation needs. The 16-Year Transportation Financial Plan is also the means by which the Legislature both portrays the biennial budget and demonstrates the means to fund infrastructure improvements incorporated in the biennial budget through the adoption of transportation project lists. The State, through WSDOT, is responsible for the maintenance, preservation, and improvement of the State's highways, bridges, facilities, and support systems, as well as the associated planning and administration. The State's primary funding sources are motor vehicle fuel taxes (MVFT); federal funding (from the federal fuel tax); revenue from license, permit and fee revenue; and bonds secured by State MVFT revenues and/or backed by the full faith and credit of the State.

The plan integrates information from multiple sources including the Washington State Ferries' long range plan, legislative actions on transportation funding, and the Transportation Commission's long-term funding study. The 16-Year transportation capital plan is driven, in large part, by the Legislative 2003 (Nickel) and 2005 (TPA) Transportation Project Lists.

WSDOT projects the 16-Year Transportation Financial Plan cash flows, including future bond issues, using an Excel-based computer model. The Legislature has developed a corresponding forecast of the 16-Year Transportation Financial Plan that is used as part of the biennial budget development process. WSDOT also uses a debt model, which computes the debt service withholding needed for the current biennium and 16-Year Transportation Financial Plan, and a "monthly plan" that identifies the bond proceeds needed during the current biennium.

2.1.1. 16-Year Financial Plan Computer Model

The 16-Year Transportation Financial Plan computer models incorporate forecast revenues and expenditures for all 17 accounts in the Motor Vehicle Fund (as well as 25 other accounts), identifies intra-account transfers, and dollars subject to federal reimbursement. The 16-Year Transportation Financial Plan computer model relies on debt service withholding data generated from the WSDOT debt model and/or data provided by the Office of the State Treasurer (OST).

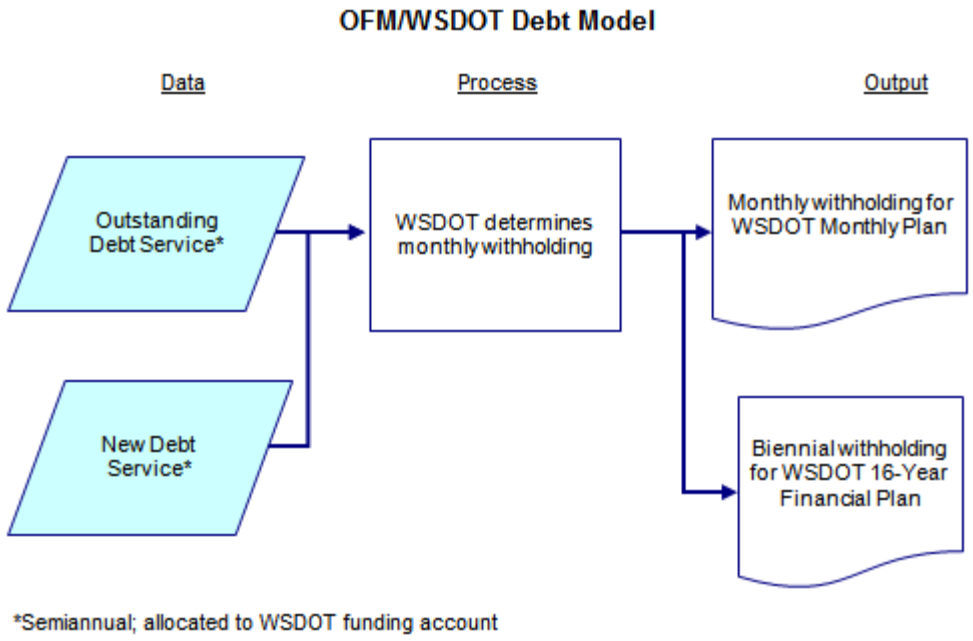
2.1.2. Legislature's Debt Model

The Legislature's budget, or debt model, replicates much of the information in the WSDOT 16-Year Transportation Financial Plan computer and debt model. The Legislature's debt model can evaluate alternative bond financing assumptions, bond issuance scenarios, and existing and planned annual debt service requirements – by bond authorization and account. The Legislative staff utilizes the model to analyze and determine the biennial budget and accompanying Legislative 16-Year Financial Plan.

2.1.3. OFM/WSDOT Debt Model

The OFM/WSDOT debt model aggregates all outstanding debt service and computes semiannual debt service on all proposed bond issues – by bond authorization and account. The debt model allows the user to determine the monthly withholding amounts for all outstanding and proposed bond issues over the next 16 years. The monthly and biennial withholding and estimated future debt service are used as data sources for the OFM/WSDOT 16-Year Transportation Financial Plan and the monthly plan.

A flow chart of the OFM/WSDOT debt model is shown below.

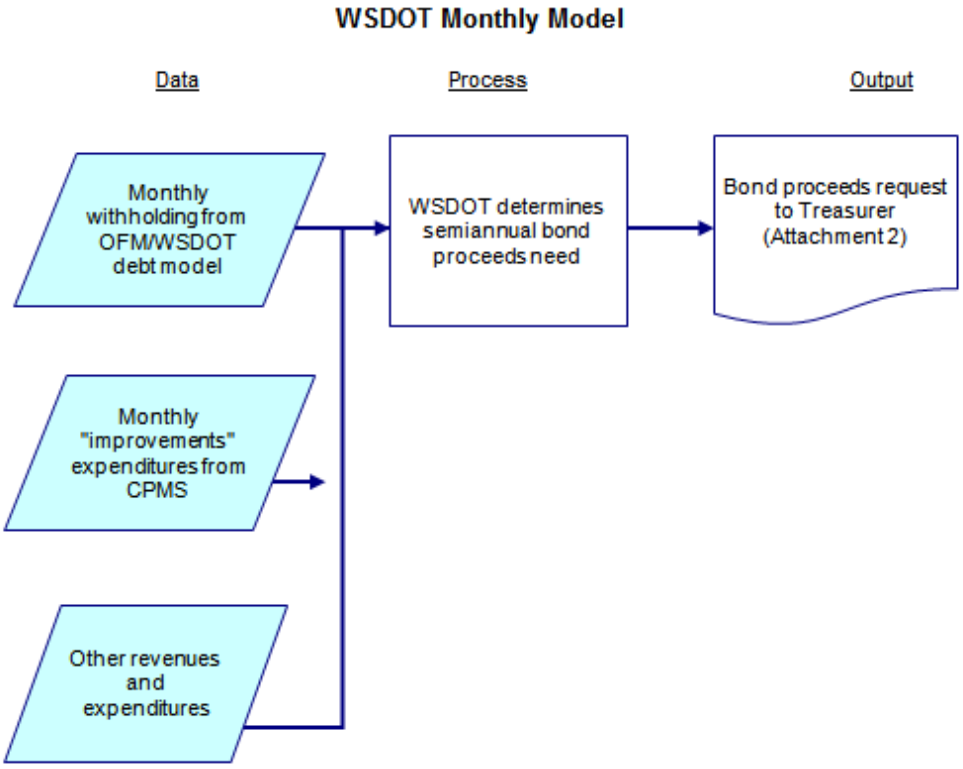


2.1.4. WSDOT Monthly Plan Model

The WSDOT monthly plan computer model projects monthly cash flows for the Transportation 2003 Account (Nickel Account) (550), Transportation Partnership Account (09H), and Special Category C Account (215). The monthly plan computer model helps determine the bond proceeds needed during the biennium based on monthly estimates of all revenues and expenditures for the funds, including monthly debt service withholding from the OFM/WSDOT debt model, and improvement expenditures from the Capital

Project Management System (CPMS). The identified need for bond proceeds is given to the State Finance Committee via OST, which issues bonds during the biennium sufficient to provide the requested proceeds.

A flow chart of the WSDOT monthly plan model is shown below.



2.3. Evaluation of Bond Financing Assumptions

The 16-Year Transportation Financial Plans include estimated bond issues necessary to finance future capital expenditures. The interest rates and costs associated with future bond issues are not known at the present, and assumptions about their values must be made. The primary bond financing assumptions used in the 16-Year Transportation Financial Plan are: 1) bond interest rates, 2) costs of issuance; 3) bond premium or discount, and 4) first year debt service withholding.

2.3.1. Interest Rate Assumption

The assumed interest rates for estimated, future MVFT bond issues that the Legislature and OFM/WSDOT currently use in their respective financial plans are based on a forecast of a tax-exempt interest rate index prepared by a private economic consulting firm. Both the Legislature and OFM/WSDOT add 29 basis points (0.29%) to the interest rate forecast. Prior to 2008, the Legislative and OFM/WSDOT financial plans added about 75 basis points to the interest rate forecast.

Legislature's Interest Rate Assumption

The future interest rates assumed in the Legislature's 16-Year Transportation Financial Plan are taken from the Global Insight forecast of the Bond Buyer 20-Bond Index (BBI), plus 29 basis points (0.29%). Global Insight is an economic consulting firm that provides a variety of forecasts, including a 10-year quarterly forecast of the BBI. The BBI is an average of the current yields on a basket of 20, A1-rated, tax-exempt general obligation bonds, for a 20-year maturity.

The Legislature uses the Global Insight forecast of BBI plus 29 basis points based on a historical comparison of the combined, average interest rate (i.e., the true interest cost or TIC) on both State Various Purpose (VP or GO bonds) and MVFT bonds to BBI. The Legislature found that over the last three fiscal years (FY 2005 to FY 2007), the TIC on State "new-money," tax-exempt MVFT bonds averaged about 29 basis points above BBI.

The following table shows the average life, bid TIC, and BBI for all Washington State VP and MVFT general obligation bonds issued in FY 2005-06 through FY 2007-08, which were new-money, tax-exempt, and current interest bonds (as opposed to refunding, taxable, or capital appreciation bonds). The State's bid TIC has averaged 5 basis points (0.05%) higher than the BBI during this period. It should be noted that the average is skewed downward as a result of the September 12, 2007 bond sales, where the bid TIC was 11 and 14 basis points lower than BBI. Although the bid TIC was significantly lower than BBI on these dates, this does not indicate the bonds priced better relative to the overall market. The BBI is determined weekly and does not reflect changes in market interest rates that occur during the week. The BBI for the following week (reset September 13, 2007) was 4.46% or 11 basis points lower.

Historical Difference
TIC vs. BBI
Washington State General Obligation and MVFT Bonds

Series	Sale Date	Average Life[1]	Bid TIC	BBI	Difference TIC vs. BBI
Various Purpose 2006A	8/16/05	18.20	4.44%	4.37%	0.07%
MVFT 2006B	8/16/05	15.28	4.38%	4.37%	0.01%
Various Purpose 2006D	1/24/06	15.27	4.43%	4.33%	0.10%
MVFT 2006E	1/24/06	15.27	4.42%	4.33%	0.09%
Various Purpose 2007A	7/18/06	17.91	4.72%	4.62%	0.10%
MVFT 2007B	7/18/06	15.45	4.69%	4.62%	0.07%
Various Purpose 2007C	1/23/07	15.31	4.41%	4.25%	0.16%
MVFT 2007D	1/23/07	15.31	4.41%	4.25%	0.16%
Various Purpose 2007F	5/15/07	15.55	4.40%	4.24%	0.16%
Various Purpose 2008A	9/12/07	16.99	4.46%	4.57%	-0.11%
MVFT 2008B	9/12/07	15.24	4.43%	4.57%	-0.14%
Various Purpose 2008C	1/8/08	15.38	4.31%	4.32%	-0.01%
MVFT 2008D	1/8/08	15.38	4.31%	4.32%	-0.01%

Notes:

1 – The weighted average maturity of the bonds. The series include bonds that mature from 1 to 25 years.

In comparison to an estimate of tax-exempt interest rates that reset daily, the correlation of the interest rate on the State's GO and MVFT bonds to national averages is more apparent. The following table shows the bid TIC in comparison to the Municipal Market Data ("MMD") estimate for a 15-year "AAA"-rated, tax-exempt, general obligation bond. The MMD "AAA GO" interest rates are a widely used benchmark for the pricing of tax-exempt bonds. The bid TIC on the State's new-money, tax-exempt, GO and MVFT bonds have been between 40 and 50 basis points of the 15-year MMD since August 2005.

Historical Difference
TIC vs. 15-Year MMD AAA GO
Washington State General Obligation and MVFT Bonds

Series	Bid TIC	MMD	Difference TIC vs. MMD
Various Purpose 2006A	4.44%	3.94%	0.50%
MVFT 2006B	4.38%	3.94%	0.44%
Various Purpose 2006D	4.43%	3.93%	0.50%
MVFT 2006E	4.42%	3.93%	0.49%
Various Purpose 2007A	4.72%	4.29%	0.43%
MVFT 2007B	4.69%	4.29%	0.40%
Various Purpose 2007C	4.41%	3.94%	0.47%
MVFT 2007D	4.41%	3.94%	0.47%
Various Purpose 2007F	4.40%	3.95%	0.45%
Various Purpose 2008A	4.46%	3.99%	0.47%
MVFT 2008B	4.43%	3.99%	0.44%
Various Purpose 2008C	4.31%	3.81%	0.50%
MVFT 2008D	4.31%	3.81%	0.50%

OFM/WSDOT's Interest Rate Assumption

WSDOT currently uses the same assumption for future interest rates as was adopted by the Legislature in the 2008 session. Prior to last session, the Legislature and OFM/WSDOT used a higher interest rate assumption as proposed by WSDOT that (according to WSDOT) was arbitrarily defined and was not tied to the Global Insight BBI forecast.

Survey of Interest Rate Assumptions

WSDOT can benchmark its interest rate assumptions to those used by other state DOTs, in order to test the reasonableness of the assumption. Benchmarking can help WSDOT determine if the interest rates are common for state transportation departments.

As part of this study, PFM complied a small sampling of state transportation department long-term financial plans that include future debt financing. The following table summarizes the interest rate assumptions used for the states of Florida, Maryland, and Virginia. Each of these states use a Bond Buyer index or forecast of the index, plus a spread.

State	Interest Rate Assumption
State of Florida *(Right of way Acquisition & Bridge Construction Trust Fund)*	Global Insight BBI forecast plus 10 basis points; five-year financial plan; "full faith and credit" bonds
State of Maryland (*Transportation Trust Fund*)	Moody's Economy.com BBI forecast less 60 basis points; six-year financial plan; 15-year general obligation bonds
State of Virginia (*Commonwealth Transportation Board*)	Bond Buyer 11 Bond Index average for last eight quarters plus 50 basis points; 20-year transportation trust fund bonds[1]
Sources: Florida Department of Transportation, *Right of Way Acquisition and Bridge Construction Trust Fund Adopted Work Program, Fiscal Year 2007-08 Through Fiscal Year 2011-12*; State of Maryland Department of Transportation, *2008-2013 Consolidated Transportation Program;* Commonwealth of Virginia Debt Capacity Advisory Committee*, Report to the Governor and General Assembly,* December 17, 2007. Notes: [1] – The Bond Buyer 11 Bond Index is an arithmetic average of a selected 11 tax-exempt GO bonds rated Aa2 by Moody's that mature in 20 years.	

Finding 2.1	The Legislature's interest rate assumptions that have been used beginning in 2008 (and subsequently adopted by OFM and WSDOT) are similar to those used by other state forecasting entities.

Survey of Interest Rate Forecasts

The determination of the Legislature's interest rate assumptions is a function of a tax-exempt interest rate forecast prepared by the economic forecasting firm Global Insight. A comparison of the Global Insight forecast to other forecasts can help determine if it is aligned with other interest rate forecasts.

Many of the largest commercial banks prepare short-term interest rate outlooks for key benchmark securities, such as the 10-year Treasury Note. The rate on the 10-year Treasury serves as an indicator of the general level of interest rates. Other firms that prepare interest rate forecasts include Moody's Economy.com, which forecasts the BBI.

Summarized in the following table are selected forecasted quarterly interest rates for the 10-year Treasury Note. The forecasts show an expected increase of 5 to 40 basis points from the 4th quarter 2008 to 2009, due in part to increased inflation. This general interest rate outlook is consistent with the Global Insight forecast of a 53 basis point increase for the BBI.

Survey of Interest Rate Forecasts

	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
10-Year Treasury Note:								
Royal Bank of Scotland	-	-	4.30	4.50	4.60	4.70	4.50	4.55
Wachovia	-	-	4.00	4.00	4.10	4.25	4.25	4.40
Wells Fargo	-	-	4.12	4.33	4.45	-	-	-
Global Insight BBI	-	-	4.43	4.29	4.21	4.22	4.46	4.82

Source: Royal Bank of Scotland, *Financial Market Forecasts*, July 2, 2008; Wachovia Economics Group, *Monthly Outlook*, July 09, 2008; Wells Fargo Economics, *Financial Market Strategies*, July 28, 2008.

Finding 2.2	While no interest rate forecast has been shown to be an accurate predictor, the base interest rate forecast that OFM/WSDOT and the Legislature rely upon (Global Insight's BBI forecast) is at least consistent with the interest rate forecasts from major financial institutions.

Index Considerations

Any comparison of the bid TIC to the BBI or any comparison of the bid TIC to a single maturity MMD such as the 15-year MMD AAA requires a certain set of cautions as summarized below:

- Timing. The BBI is published weekly, while interest rates can change considerably on a daily basis.
- Single Maturity. The BBI is a single maturity (20 years) while the State issues bonds with maturities ranging from 1 to 25 years. Similarly, a single maturity MMD only captures one maturity (e.g., 15 years) versus the State's 1 to 25 years.
- Yield Curve. The TIC on a state bond issue is influenced by the shape of the yield curve (i.e., the difference between short-term and long-term interest rates), which is not captured by a single maturity index such as the BBI or a single maturity MMD.

As such, a comparison of the bid TIC (1-25 years) to the BBI (20 year only) or a comparison of the bid TIC (1-25 years) to a single maturity MMD (e.g., 15 years) would not be suitable for monitoring the performance of the State's bond sales relative to the broader market.

However, for a less precise application, such as a forecast of future interest rates, the BBI is well suited (assuming 25-year, level debt service). The BBI forecasted through the

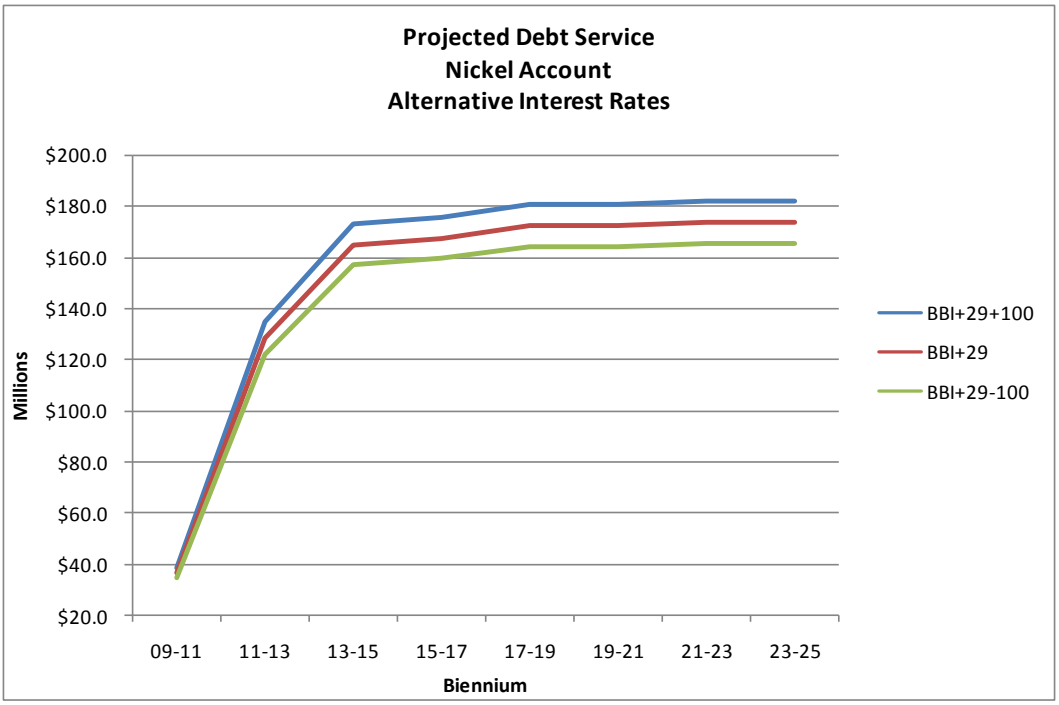
OFC also has the additional benefits of providing a transparent, standard, independent, and auditable way of obtaining an estimate of the projected interest rates.

Ultimately, the size of the interest buffer is a policy choice. Buffers from 25 basis points to 75 points or higher may be appropriate depending upon the unique facts and circumstances of the financing plan, including the types and timing of the projects contemplated, and the level of risks that would be acceptable.

Risks of a Lowered Interest Rate Assumption

The lower interest rate assumption in the current 16-Year Transportation Financial Plan reduces the projected debt service and increases projected resources available for other purposes. If actual interest rates are higher than assumed, actual debt service will be greater than estimated in the 16-Year Transportation Financial Plan, which could indefinitely delay identified capital projects or other expenditures. Conversely, if actual interest rates are lower than estimated, the State will have additional resources that could have been allocated to currently identified needs.

The following chart shows the potential debt service impact of alternative interest rate outcomes for the Nickel Account. Debt service is shown at the Global Insight BBI forecast + 29 basis points (under the currently assumed $1.15 billion of additional borrowing in the 16-Year Transportation Financial Plan), and plus and minus 100 basis points. If interest rates are 100 basis points higher than currently assumed, WSDOT would expend an additional $58.15 million on debt service, or 4.9% more, during the next 16 years. Conversely, if interest rates are 100 basis points lower than currently assumed, WSDOT would save $56.9 million, or 4.8%, in debt service payments over the next 16 years.



Although inaccurate interest rate assumptions can reduce or add to the amount of capital or other spending that is currently contemplated in the plan, the State can take the following future actions to offset the impact of higher interest rates.

- Refund debt for savings: The State has historically refunded (i.e., refinanced) outstanding debt when it can achieve interest rate savings. In the event that interest rates are higher than the Global Insight BBI plus 29 at the time bonds are sold, subsequent interest rate decreases, if any, can allow for a refinancing of the bonds at a lower interest cost.

- Extend maturity schedule: The State historically issues the MVFT current interest bonds with a 25 year maturity schedule, where principal amounts in each year are sized to produce approximately equal annual payments of principal and interest. The State can potentially extend the final maturity of its MVFT bonds to 30 years, which would reduce the annual debt service requirement and offset the cash flow impact of higher than expected interest rates. As an example, if the currently planned bond issues for the Nickel Account have 30 year maturity schedules instead of 25 years, debt service would be $89.57 million less during the planning horizon of the 16-Year Transportation Plan. However, total debt service over the life of the issue would increase.

There are certain policy and cost implications to these potential actions. A discussion of these implications is beyond the scope of this study.

Conclusions and Recommendations

PFM believes that the current interest rate assumption the Legislature and OFM/WSDOT use is reasonable and would not recommend any changes, given the interest rate forecast is consistent with forecasts prepared by other major financial institutions and is also used by other state forecasting entities. In addition, the underlying interest rate index is correlated with the average interest rate on the State's general obligation bonds.

The Legislature's lower assumed interest rate (lowered from approximately 75 basis points to 29 basis points above the base interest rate forecast) reduces the projected interest on MVFT bonds and increases the amount of transportation capital that can be leveraged from projected revenues. At the same time, the lower assumed interest rate increases the risk that transportation capital projects cannot be completed as scheduled or other expenditures must be delayed if the actual interest rates on future MVFT bonds are higher than assumed. However, in the event future interest rates are higher, the State can take future actions to offset this cost, including refunding debt at a lower interest cost, delaying the amortization of principal, or extending the term of the bonds.[1]

Recommendation 2.1	The Legislature's lower interest rate assumption that has been used beginning in 2008 (and subsequently adopted by OFM and WSDOT), which adds 29 basis points to the Global Insight BBI forecast, appears reasonable and is not overly aggressive, as the TIC on appropriate State MVFT bonds has been just 5 basis points higher than BBI over the last three years, and we do not recommend a change to the assumption.

Recommendation 2.2	The Legislature should continue to monitor the relationship between future State MVFT bond issues (new-money, non-AMT tax-exempt, current interest bonds) and the BBI, and revisit the Legislature's interest rate assumption in the event the TIC exceeds the BBI by more than 29 basis points. The Legislature should consult with the OST, who can confer with its financial advisors and bond underwriters, to identify and evaluate any credit or bond market changes that caused the increased spread to BBI.

2.3.2. Costs of Issuance

The State incurs costs for each of its public bond sales for the bond underwriters' commission and other professional services fees. In addition, the bond underwriters have historically purchased bond insurance and pass this cost to the State as part of their purchase price for the bonds. However, the bond underwriters did not purchase insurance for the most recent January 2008 and July 2008 bond sales. The use of insurance has generally declined since late 2007 due to the rating downgrades of most of

[1] There are certain policy and cost implications to these potential actions. A discussion of these implications is beyond the scope of this study.

the bond insurers. Also, the State has the relatively high bond ratings of "Aa1" from Moody's and "AA+" from S&P, which are just one step below the highest bond ratings, and bond insurance may not produce a lower, net interest cost (adjusting for the insurance premium), especially given the recent downgrades of the bond insurers.

Starting with the 2008 budget development cycle, the Legislature assumed that future bond sale costs will be 0.51% (0.45% underwriter's discount and 0.06% cost of issuance) of the principal amount for all projected bond sales. The current assumption is a change from prior years, when OST, OFM, WSDOT, and the Legislature assumed 1.00% for bond sales costs (75 to 95 basis points for underwriter's discount and 5 to 25 for sales costs). WSDOT has subsequently adopted the Legislative assumptions.

The previous assumption of 1.00% for bond sales costs appears high, given the historical amount paid on all State bond issues (excluding capital appreciation bonds) since July 2005 has averaged 0.21%. The State is a large and frequent issuer of highly-rated bonds, which require less time and effort to sell and have less inherent risk, which will tend to lower the underwriter commission. In addition, the underwriter's discount for competitively priced, tax-exempt bonds has generally decreased nationwide since 1999, based on data compiled by Thomson Financial. In 1999, the nationwide average underwriter's "spread," including all fees and expenses, was 0.68%. The nationwide average underwriter's spread has decreased in each year since 1999, excluding 2004, and was 0.41% in 2007.

Recommendation 2.3	The Legislature and OFM/WSDOT should continue to use the Legislature's assumption for future bond sales costs of 0.51% of the principal amount for all projected bond sales, as this percentage is much closer to the amount paid on historical State bond issues and the nationwide average underwriter's spread.

Recommendation 2.4	The Legislature should continue to monitor the bond sales costs for future State MVFT bond issues (new-money, non-AMT tax-exempt, current interest bonds) and revisit the Legislature's assumption in the event actual bond sales costs exceed 0.51% of the principal amount. The Legislature should consult with the OST, who can confer with its financial advisors and bond underwriters, to identify and evaluate any credit or bond market changes that caused the increased bond sales costs.

2.3.3. Bond Premium or Discount

The amount of bond premium or discount realized on MVFT bond issues is a function of the bid parameters, interest rate expectations, and bond investor preferences. OST has historically sold bonds through a competitive bid and sets parameters on the amount of

premium or discount that can be bid by the underwriters. On recent MVFT bond sales, bidders could bid an amount ranging from par (i.e., the principal amount of the bonds) up to 107 percent of par. This bid parameter will always result in at least a par bid.

The coupons bid by the underwriters, and the resulting premium, is a function of current interest rate expectations and bond investor preferences. In the present interest rate environment, bond investors have demonstrated a preference for a "premium" coupon (i.e., a coupon greater than the bond yield). This preference is exhibited by the ubiquitous 5% coupon that has been bid on recent MVFT bond issues. The 10 most recent MVFT bond issues have all included premium. In total, the premium has generated about 5%, or $119.97 million more than the $2.37 billion par amount and may have contributed to higher than expected WSDOT fund balances.

Historical Original Issue Premium
State of Washington Motor Vehicle Fuel Tax Bonds

Series	Par	Original Issue Premium[1]	% Premium
2004E	$ 58,850,000	$ 473,330.25	0.80%
2005B	173,700,000	6,413,431.15	3.69%
2005E	85,000,000	5,048,007.60	5.94%
2006B	197,000,000	13,522,107.70	6.86%
2006E	260,000,000	16,624,710.25	6.39%
2007B	176,060,000	6,690,522.90	3.80%
2007D	402,350,000	5,466,556.75	1.36%
2008B	387,000,000	24,218,036.45	6.26%
2008D	375,000,000	27,430,133.55	7.31%
2009B	260,000,000	14,084,014.00	5.42%
	$2,374,960,000	$119,970,850.60	5.05%

Source: Official Statement

1 – Original issue premium includes the underwriting spread. The amount received by WSDOT is net of the underwriting spread.

The OFM/WSDOT 16-Year Transportation Financial Plan and Legislative budget and planning models do not assume any premium on future MVFT bond issues. In the event that future MVFT bond issues generate an amount of premium that is similar to recent MVFT bonds sales, the State would receive more bond proceeds than expected and WSDOT may not have a spending plan for the bond proceeds. The premium also results in higher debt service in comparison to bonds with par coupons, if the future bond sale amounts are not correspondingly reduced by the amount of premium.

It is difficult to predict the amount of future bond premium on MVFT bonds, as it is a function of future interest rate expectations and bond investor preferences. Although certain bond investors (and as a result, bond underwriters) currently prefer a premium coupon, this preference may change as interest rates rise. Because of this uncertainty, we do not recommend that OST/WSDOT or the Legislature include an estimate of bond premium on future bond issues. Instead, WSDOT should request that the Office of the State Treasurer adjust the par amount of bonds offered for sale in order to more precisely target the amount of bond proceeds that are needed and offset any bond premium or discount. OST may also be able to reduce the principal amount of the bonds at the time competitive bids are submitted, based on the coupons that are bid.

Recommendation 2.5	WSDOT should request that the Office of the State Treasurer adjust the par amount of bonds offered for sale in order to more precisely target the amount of bond proceeds that are needed and offset any bond premium or discount.

2.3.4. Debt Service Withholding

Debt service withholding is the setting-aside of pledged revenue for payment of debt service prior to the scheduled principal and interest payments. Debt service withholding is common for government issuers of revenue bonds (i.e., bonds secured by specified revenues such as sales tax or user fees), as the set-aside ensures that debt service payments are made on time, which helps in the marketing of the bonds to investors. The issuer promises, in their respective bond documents, to set aside revenue in advance for payment of debt service. Conversely, many government issuers, particularly for general obligation bonds, do not promise, or believe it is necessary to promise (either to help market the bonds or for administrative ease) to set-aside revenue for debt service.

The State has agreed to set-aside revenue for certain MVFT bonds. The legislation that authorized the issuance of highway construction bonds beginning with the 1951 Act through the 1981 Act (RCW 47.10.080, 47.10.220, 47.10.350, 47.10.480, 47.10.720, 47.10.733, 47.10.758, 47.10.769, 47.10.795, 47.10.806), requires that the Treasurer make monthly set-asides of MVFT and that the State Finance Committee determine the amount one year in advance. The following language in the 1951 Act describes the set-aside requirement.

RCW 47.10.080	
At least one year prior to the date any interest is due and payable on such bonds or before the maturity date of any bonds, the state finance committee shall estimate, subject to the provisions of RCW 47.10.070, the percentage of the receipts in money of the motor vehicle fund, resulting from collection of excise taxes on motor vehicle fuels, for each month of the year which will be required to meet interest or bond payments hereunder when due, and shall notify the state treasurer of such estimated requirement. The state treasurer shall thereafter from time to time each month as such funds are paid into the motor vehicle fund, transfer such percentage of the monthly receipts from excise taxes on motor vehicle fuels of the motor vehicle fund to the highway bond retirement fund, which is hereby established, and which fund shall be available solely for payment of such interest or bonds when due. If in any month it shall appear that the estimated percentage of money so made is insufficient to meet the requirements for interest or bond retirement, the treasurer shall notify the state finance committee forthwith and such committee shall adjust its estimates so that all requirements for interest and principal of all bonds issued shall be fully met at all times.	

The "official statement" that is prepared for each MVFT bond issue contains wording similar to RCW 47.10.080, and conveys the State's intent to set-aside MVFT for the particular series of bonds.[2]

Although much of the authorizing legislation for highway construction bonds clearly requires monthly set-asides, the language for more recent bond authorizations, including the 1998 Act, 2003 Transportation Projects Act, and 2005 Act do not. For example, the 2005 bond authorization only requires that the Treasure transfer funds for debt service "on or before the date on which any interest or principal and interest is due" (RCW 47.10.869(1)(b)).

Current Withholding Practices

WSDOT estimates the monthly withholding for all MVFT bonds using the WSDOT debt model. The debt model aggregates all outstanding and planned debt service, and allocates this cost to the appropriate WSDOT account. The user of the model manually determines a level monthly amount that is sufficient to pay the upcoming semiannual debt service payment.

The amount withheld during a biennium is not always equal to the amount of debt service that is due and payable during the biennium. If a debt service payment is due within the first six months of the following biennium, a large portion is funded from the current year's revenues and debt service account balance.

As an example, the following table shows the estimated debt service and debt service withholding amounts during the 2007-09 biennium for the Nickel Account. The total debt

[2] The bond underwriter that purchases the State's bonds is required to distribute the State's official statement to investors, in accordance with Securities Exchange Commission regulations.

service withholding is $209.55 million, while the actual debt service payable is $184.71 million. The withholding is greater than the actual debt service because debt service in the following biennium is higher than the current biennium.

Debt Service Withholding vs. Projected Debt Service
Nickel Account
2007-09 Biennium

Month	Withholding	Projected Debt Service	Budgeted Debt Service
Jul-07	$7,100,000	$35,432,713	
Aug-07	7,100,000		
Sep-07	7,100,000		
Oct-07	7,100,000		
Nov-07	7,100,000		
Dec-07	7,100,000		
Jan-08	7,850,000	43,289,463	
Feb-08	7,850,000		
Mar-08	7,850,000		
Apr-08	7,850,000		
May-08	7,850,000		
Jun-08	7,850,000		
Jul-08	9,375,000	49,161,721	
Aug-08	9,375,000		
Sep-08	9,375,000		
Oct-08	9,375,000		
Nov-08	9,375,000		
Dec-08	9,375,000		
Jan-09	10,600,000	56,829,135	
Feb-09	10,600,000		
Mar-09	10,600,000		
Apr-09	10,600,000		
May-09	10,600,000		
Jun-09	10,600,000		
Total	$209,550,000	$184,713,032	$181,251,628

Because WSDOT will withhold for future debt service during the biennium, but has only budgeted for the lower outstanding debt service amount, WSDOT expects to spend more than the amount budgeted. In the event WSDOT expends the amount budgeted for all other items, there would be a shortfall for debt service. However, based on historical results, WSDOT does not expect to spend the amount budgeted for capital costs, which will create a surplus that can be used for debt service withholding.

Going forward, WSDOT, the Legislature, and OFM should attempt to budget the amount it intends to withhold. The WSDOT budget should represent the amount that WSDOT expects to expend on all items, in order that the State's limited resources are allocated to the intended purposes.

WSDOT could potentially reduce the amount withheld and continue to comply with the RCW and other bond documents. This would require that WSDOT identify the bonds that are not subject to a withholding or monthly set-aside requirement. Bond counsel would ultimately determine if the language in the official statements (particularly for 2003 and 2005 Act bond issues) is binding. If WSDOT is able to avoid withholding for a portion of its bonds, it should then develop a plan (e.g., identify cash balance or future year's revenue) to fund debt service payments that are payable immediately after the biennium.

Conclusions and Recommendations

WSDOT is generally restricted in the manner it withholds revenues for the payment of future debt service. The Revised Codes of Washington (RCW) that authorized pre-1993 motor vehicle fuel tax bonds, certain bond resolutions, and the State's bond offering documents, identify monthly set-aside or 30-day advance withholding requirements for debt service. Unless WSDOT or another State agency identifies the subset of specific bonds that are subject to the RCW, appropriate bond resolutions or bond offering document statements that identify the debt service withholding requirements, and identifies a funding plan for remaining debt service that is not subject to withholding, we would not recommend that WSDOT eliminate or change its existing debt withholding practices.

Recommendation 2.6	WSDOT should continue its practice of monthly withholding and transferring approximately 1/6th of the upcoming semiannual debt service payment to the relevant debt service fund. WSDOT should adjust the amount transferred so that the balance in the relevant debt service fund (after the transfer for that month is made) is approximately equal to, but not less than, the semiannual debt service payment becoming due in the following month. The WSDOT budget for debt service should be equal to the amount expected to be withheld. The WSDOT supplemental budget for debt service should reflect any changes in the bond issue amounts from the original budget.

Recommendation 2.7	WSDOT should not change its debt service withholding practice unless the State identifies the specific legal restrictions for debt service withholding and WSDOT prepares an alternative funding plan for debt service. WSDOT and the Legislature should confer with the OST, who may consult with its bond counsel, prior to making any changes to the debt service withholding practice.

Debt Service Withholding in the WSDOT Debt Model

The WSDOT debt model identifies monthly debt service withholding for the current biennium, as well as for 16 additional years. Notwithstanding the legal or policy requirements for debt service withholding, there appears to be limited benefit from identifying monthly withholding amounts beyond the current biennium, given that the long-term financial planning models work with annual or biennial cash flows. WSDOT should consider eliminating the task of manually determining monthly withholding amounts, and instead assume that all or a portion of debt service payments that are due during the first 6 months of the following biennium are budgeted in the prior biennium.

Recommendation 2.8	WSDOT should eliminate the task of manually determining monthly debt service withholding amounts for years beyond the current budget biennium, as this information has limited benefit given the financial planning models use annual or biennial cash flows.

3. Cash Management Practices for Capital Expenditures

A review of historical cash balances for the major WSDOT accounts shows that large balances persist and have steadily grown over the last 5 years. Over the same period, WSDOT has issued over $2.4 billion in debt for transportation projects. The large cash balance may indicate that WSDOT is under-spending its budget, which diverts resources from other uses, and may result in the issuance of debt when cash is available.

This section attempts to identify the financial factors that contribute to the capital under-spending and large cash balances and recommends changes in debt issuance and capital planning practices that can work to reduce the cash balances and WSDOT's net interest costs.[3]

3.1. Current Practices

WSDOT has a wide-range of responsibilities and mandates that impact its cash management practices. WSDOT must account for revenues that are restricted to specific purposes, manage the reimbursement of federal transportation dollars, allocate projects to bond funding acts, and manage a multibillion dollar capital improvement program.

WSDOT administers 30 separate accounts to help ensure it meets its spending restrictions, has created various information systems to help manage its projects and allocate costs, and has developed custom financial planning computer models to manage its debt program.

3.1.1. WSDOT Funds and Accounts

WSDOT maintains several funds and accounts in order to manage revenues and expenditures that are designated for specific uses. The multiple funds are used to account for revenue sources that are earmarked for certain programs, or specific project expenditures. Although funds in different accounts may be used for similar purposes, each account may have different restrictions.

The State transportation programs are primarily funded from accounts created within the Motor Vehicle Fund. Other WSDOT funds include the Multimodal Transportation Fund and the Transportation Bond Fund. A description of the three primary accounts within the Motor Vehicle Fund that support the largest amount of bond issues in the 16-Year Financial Plan is provided below.

Account	Description
Motor Vehicle Account (108)	The largest transportation account and recipient of the most federal revenue. Supports highway and highway-related programs. Major revenues

[3] The study does not attempt to identify cost estimation, project management, or other non-financial practices that may attribute to the under-spending of capital expenditures, as this area of research is beyond the scope.

Account	Description
	include federal grants, state motor fuel taxes, and vehicle registration fees. Pursuant to the 18th Amendment of the State Constitution, expenditures are restricted to state, city and county highway maintenance and construction, highway-related activities of the Washington State Patrol, Washington State Ferries, and other highway purposes. Supports the repayment of bonds approved through Referendum 49.
Transportation 2003 Account (Nickel Account) (550)	This account supports the highway programs, including construction and maintenance of state, city, and country roads. Uses include debt service on bonds, and support of the WSDOT operating and capital highway programs. Fund sources include Motor Vehicle Fuel Tax, motor vehicle licenses, permits, and fees, miscellaneous revenues, bond proceeds, and 80% of treasury deposit earnings (as of July 1, 2009, the account will retain 100% of deposit earnings less an OST service fee of .50%). Funds placed into this account are subject to the 18th Amendment.
Transportation Partnership Account (09H)	This account is used for projects or improvements in the omnibus transportation appropriations act. Expenditures from the account must be used only for projects or improvements identified as 2005 transportation partnership projects or improvements. This includes any principal and interest on bonds authorized for the projects or improvements.

Minimum Fund Balances

WSDOT, OFM, and the Legislature have identified target minimum fund balances that WSDOT attempts to achieve when determining bond sizes and preparing its budget. The minimums range from $100,000 to $30.0 million in the 2008 Legislative plan. Currently, there is no formal policy for setting the minimum fund balances and the minimums are not proportional to the actual balances.

The following table shows the minimum and actual fund balances for selected WSDOT accounts as of June 2008. The actual fund balances are 455% to 2,200% of the minimum amounts.

Minimum vs. Actual Account Balances
WSDOT
June 2008
(In millions)

Account	Minimum Balance	June 2008 Balance	% Actual/ Minimum
Motor Vehicle Account (108)	$21.0	$96	457%
Transportation 2003 (Nickel) Account (550)	15.0	238	1,587%
Transportation Partnership Account (09H)	30.0	235	783%
Multimodal Transportation (218)	2.0	44	2,200%
Special Category C (215)	1.1	5	455%

Source: WSDOT, Office of the State Treasurer, Legislature

It is difficult to evaluate the reasonableness or adequacy of the minimum fund balances, as there was limited analysis prepared in determining the amounts. Nevertheless, given the ratio of actual to minimum fund balances, the minimums do not appear to contribute to WSDOT's larger-than-expected cash balances.

Conversely, it is unclear if the reserves are adequate, and we recommend that WSDOT perform financial analysis to determine the amounts. A commonly-used approach in setting minimum fund balances involves the preparation of cash flow scenarios using worst-case assumptions (i.e., contingency planning or financial risk analysis). For example, one of the major risks to the current budget and the 16-Year Transportation Financial Plan is a downturn in MVFT revenue. In the event of a downturn, the Legislature, OFM, and WSDOT would need to make cost reductions, such as delaying capital projects and/or the purchase of non-essential items. At some point, however, WSDOT would not be able to further reduce costs, as many are fixed (e.g., labor contracts, debt service payments) or relate to work in progress. An appropriate amount of reserves is the amount that allows WSDOT to fund its fixed costs and other priorities in the event of a revenue shortfall.

Recommendation 3.1	OFM/WSDOT and the Legislature should work together to determine minimum fund balances for the WSDOT administered funds. The minimum fund balances should be the amount needed, along with other WSDOT revenues, to fund fixed costs and high-priority expenditures after a downturn in major revenues, consideration of the potential to delay or eliminate certain capital and operating costs, and accessing any additional sources of liquidity.

Fund Liquidity

Other than its minimum fund balances, WSDOT does not formally maintain any source of additional funds that can provide liquidity in the event that funding is needed and revenues or fund balance are not otherwise available. An identified source of liquidity can help WSDOT with its cash flow management, and potentially work to reduce its fund balances. There are two existing sources of funds that can provide a limited amount of liquidity – the MVFT bonds and de facto borrowing from the Washington State concentration account (the investment pool).

The OST issues bonds every six months, which gives WSDOT relatively quick access to an ongoing and reliable source of capital funding. WSDOT can use the MVFT bonds as a source of liquidity, and size its bond issues sufficient to maintain a minimum fund balance prior to each bond issue (see "Bond Sizing and Timing" herein).

WSDOT can also legally incur a negative fund balance (subject to approval from OFM), which results in a de facto borrowing from the Washington State investment pool. Any negative fund balance would incur interest expense at the pool rate plus an OST administrative fee. While a de factor borrowing is possible, this can be disruptive to the OST investment strategy, which attempts to maintain liquidity for identified needs and not for potential fund shortfalls. The OST could potentially create ongoing liquidity on behalf of WSDOT, if the affected State entities could agree to such a plan, but the cost for this liquidity would likely be higher than liquidity available from the capital markets.

The State could create a new source of liquidity using short-term borrowing from the capital markets. A commonly used and cost-effective approach is a tax-exempt commercial paper program. Such a program would allow the State to borrow, as-needed, at short-term, tax-exempt interest rates, which were about 1.50% for 30-day commercial paper as of July 2008. A commercial paper program requires the payment of ongoing bank and underwriter fees, which could be as much as 1.10% of the amount outstanding (resulting in an all-in cost of 2.60%), as well as ongoing bank fees on amounts available but not outstanding.

3.1.2. Capital Expenditure Projections

WSDOT uses the Capital Program Management System (CPMS) to generate projected capital expenditures on a cash basis. Numerous WSDOT project managers prepare cost estimates and expenditure projections (which are updated monthly) for their respective projects and enter this information into CPMS. As work progresses on the projects, the project managers approve progress payments to the contractors, and allocate WSDOT staff and other costs to the projects. The CPMS is linked to the WSDOT Transportation Reporting and Accounting Information System (TRAINS), which allows WSDOT to make payment to contractors upon approval from the project managers. WSDOT makes payments (i.e., issues warrants) three times per week.

The capital improvements expenditure data from CPMS is used in the WSDOT monthly plan computer model (which is used to size bond issues during the biennium). The CPMS provides monthly capital expenditure projections for each month remaining in the biennium, plus an additional "25th month" of expenditures. The 25th month reflects expenditures accrued in the last month of the biennium, but that will not be expended until the following year. Given the 25th month expenditures do not reflect cash outlays during the biennium, and the budget and 16-Year Transportation Financial Plan reflect actual cash flows, we recommend that they are moved from the WSDOT monthly plan and the biennial budget into the following biennium. The shifting of the 25th month expenditures to the following biennium will increase the accuracy of the cash flow projections and could help reduce the budget versus actual variance for capital expenditures and the larger-than-expected cash balance.

Recommendation 3.2	WSDOT should move the "25th month" of capital improvements expenditures from its monthly plan and its biennial budget into the following biennium, as the actual outlay of cash will occur in the following fiscal year.

Funding Expenditures Accrued in the Prior Biennium

The removal of the 25th month expenditures from the current biennial budget will push the expenditure to the following biennium. There is a potential that the expenditures could be financed with bonds issued in the following biennium. This does not appear to conflict with the provisions of the State's bond authorization act, which do not tie expenditures to particular bond issues or limit the timing of bond issues.

3.1.3. Budget Monitoring and Evaluation

A key principal of state and local budgeting best practices is the evaluation of budget performance and the making of adjustments. Government must evaluate its budget performance in order to utilize its scarce resources in the most efficient manner. Budget performance is measured by comparing actual expenditures to the amount budgeted. Any significant and recurring variances to the budget should be analyzed and the government should identify adjustments and changes in practices that can improve its budget performance.

WSDOT utilizes several financial and project management information systems that track and forecast capital expenditures, and monitor the status of the capital projects. However, WSDOT does not have a formal or well-defined process that uses the available information to monitor their budget performance. The implementation of additional budget monitoring processes, particularly for WSDOT capital expenditures, would be a vital step toward improving capital budget performance, as the specific factors that cause the budget variance can be identified.

WSDOT can implement a capital budget monitoring process using expenditure data from its CPMS system and report its budget performance, by major account, as part of its "Monthly Financial Report."

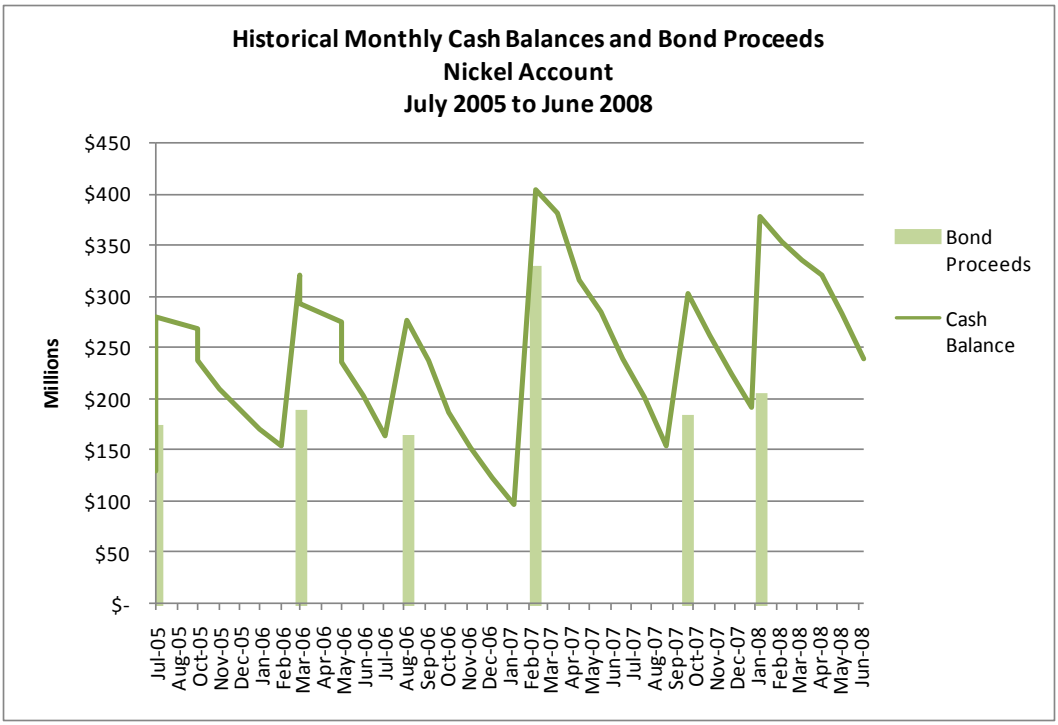
Recommendation 3.3	WSDOT should implement a formal and well-defined process of monitoring and measuring its budgeted and actual capital expenditures in an attempt to improve its budgetary performance and more efficiently allocate and utilize scarce resources.

3.1.4. Bond Sizing and Timing

WSDOT determines the amount of bond proceeds needed during the biennium using the WSDOT monthly plan computer model. The needed bond proceeds is the amount that, when issued in various portions every six months, will result in a minimum fund balance at the time of the next bond sale. WSDOT then submits a request for bond proceeds to the Office of the State Treasurer prior to each of the semiannual bond offerings. The request for bond proceeds includes a projection of monthly capital expenditures that will be bond funded, adjusted for actual expenditures to date.

Historical Bond Issuance and Fund Balances

The proceeds from WSDOT bond issues are deposited into the appropriate WSDOT account (e.g., Nickel, TPA, and Special Category C), and comingled with other account revenues. The following chart shows the historical impact of bond proceeds of the Nickel Account fund balance from July 2005. The data show that bond proceeds increase the fund balance immediately upon deposit, but the fund balance is not reduced to the designated minimum at the time of the following bond sale or by the end of the biennium.



WSDOT may be better able to reduce its cash balance to the designated minimum fund balance by excluding the 25th month expenditures from the current biennium (see Recommendation 3.2), which would reduce the size of the related bond issue. In addition, WSDOT should adjust the size of its bond sale requests in the event that actual and projected bond funded expenditures are lower than initially estimated. WSDOT submits its bond sale requests 2 to 3 months prior to the bond sale. During the intervening time, actual and projected bond funded expenditures can decrease, which would reduce the amount of bond proceeds that are needed.

Recommendation 3.4	WSDOT should exclude any accrued "25th month" capital expenditures when determining the amount of its bond sale request. WSDOT should also reduce its initial bond sale request if actual and projected bond funded expenditures are lower than those estimated at the time of the initial request.

3.1.5. Basis of Accounting in the Financial Plan

The 16-Year Transportation Financial Plan reflects the projected cash flow of revenues and expenditures, as well as the cash balance, of the relevant WSDOT administered funds.[4] The cash flows and fund balances for the current biennium tie to the budgeted amounts, which are also presented on a cash basis. However, as discussed in section "3.1.2. Capital Expenditure Projections," the capital expenditure projections for certain funds include a 25th month of expenditures, which are accrued expenditures. This report

[4] The 16-Year Transportation Financial Plan makes an "Accrual/Cash Conversion" that removes accrued motor vehicle fuel tax revenue from the actual, beginning fund balance.

recommends that the 25th month of expenditures is converted to a cash basis and shown as expenditures in the following biennium.

Cash vs. Accrual

The 16-Year Transportation Financial Plan computer model attempts to identify the amount of capital projects that can be funded, given a specified amount of transportation revenues and bond authorization, and the need to maintain positive cash balances within the relevant WSDOT funds.

The plan does not attempt to reconcile to the State's financial statements or maintain a positive fund balance as defined in the State's financial statements. The State's financial statements are prepared on an accrual basis and net assets are reported "as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows."[5] The accrual basis provides a more comprehensive presentation of an entity's financial position or financial results for a specified period than the cash basis of accounting.

Given the computer model attempts to size bond issues sufficient to meet cash expenditures and produce a positive cash balance for WSDOT funds, the revenues and expenditures in the 16-Year Transportation Financial Plan should reflect cash flows and not accruals. The potential danger from the use of accruals is demonstrated by the 25th month expenditures, which can cause debt to be issued earlier than needed and the accumulation of larger than expected cash balances.

3.2. Historical Accuracy of Capital Expenditure Projections

A comparison of actual to budgeted or planned capital expenditures shows that WSDOT as a whole, and for its largest accounts, has significantly overestimated its capital expenditures. The result of the under-spending of budgeted expenditures may contribute to the growing cash balances in the major accounts that support bond funding.

3.2.1. Actual vs. Projected Capital Expenditures

From a macro perspective, WSDOT has significantly under-spent its capital budget over the last several biennia. Budgeted capital outlay for the Motor Vehicle Fund, the largest of WSDOT's funds, has exceeded actual expenditures by an average of $688.14 million over the last three biennia, or 23% less than the amount budgeted. The budgeted outlays for the Multimodal Fund have exceeded actual expenditures by an average of $35.46 million, or 34%.

[5] State of Washington, *2007 Comprehensive Annual Financial Report*, p. 21.

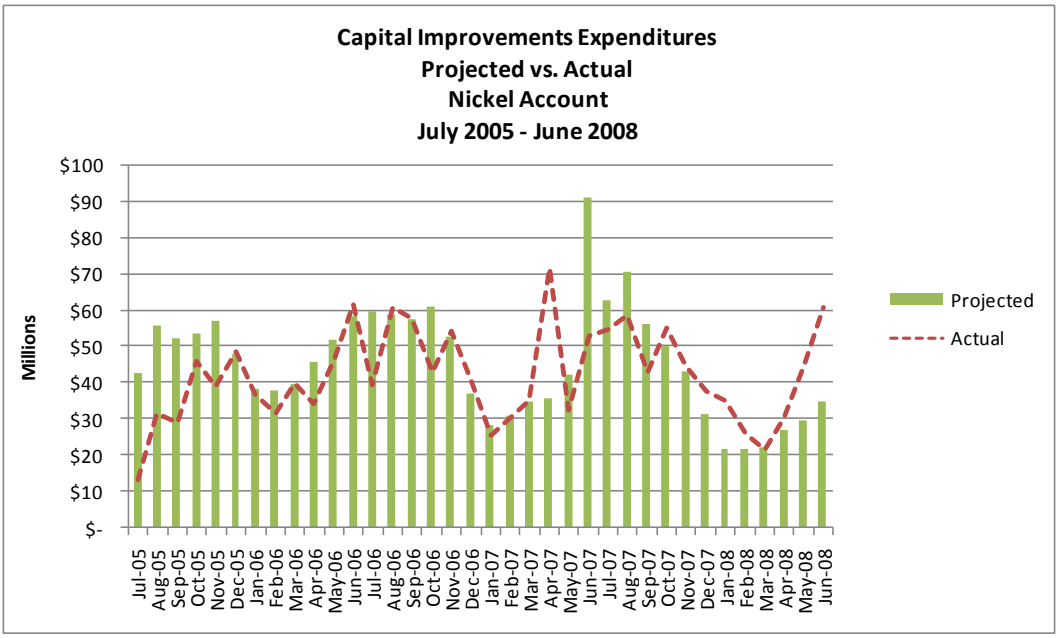
Capital Outlay
Budget vs. Actual
Motor Vehicle and Multimodal Funds

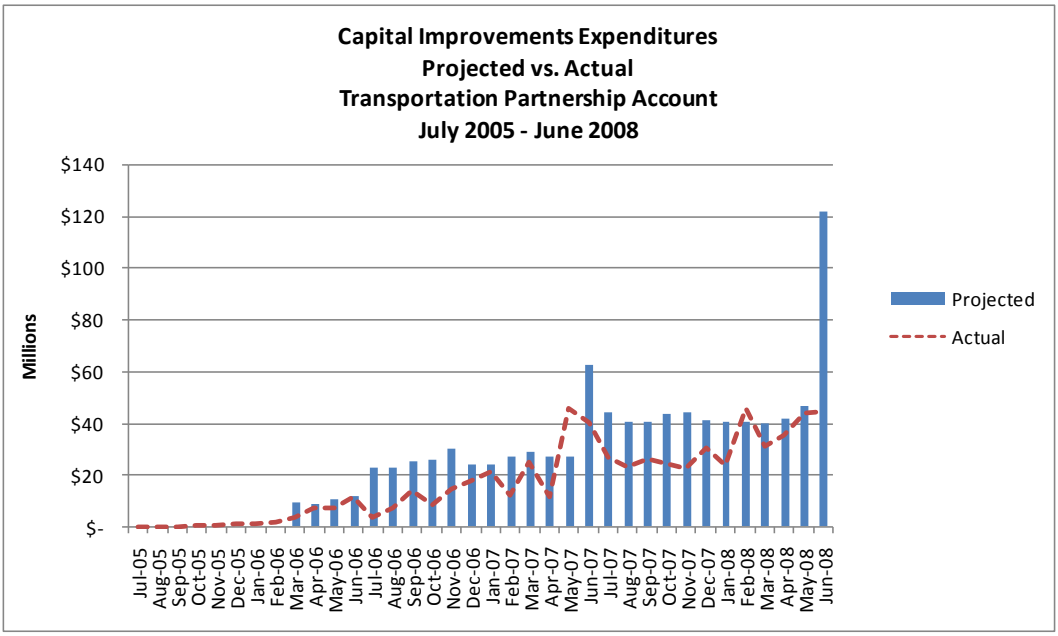
	Final Budget	Actual	Variance	% Variance
Motor Vehicle Fund:				
2001-03	$2,691,469	$1,930,894	$760,575	28.3%
2003-05	2,892,027	2,229,474	662,553	22.9%
2005-07	3,541,937	2,900,647	641,290	18.1%
Multimodal Fund:				
2001-03	$107,240	$79,272	$27,968	26.1%
2003-05	103,522	60,568	42,954	41.5%
2005-07	143,967	80,917	63,050	43.8%

Source: State of Washington, Audited General Purpose Financial Statements, "Combining Schedule of Revenues, Expenditures, and Other Financing Sources (Uses) - Budget and Actual."

At the fund level, a review of historical expenditures shows that WSDOT has spent less than the amount budgeted for capital improvements budget within each of the major WSDOT accounts that support bond funding.

The following charts show projected/budgeted and actual capital expenditures from July 2005 through June 2008 for the Nickel Account and TPA. Since July 2005, WSDOT budgeted $1.65 billion in capital improvements from the Nickel Account and expended $1.51 billion (91%), and budgeted $966.41 million in the TPA and expended $630.19 million (65%).

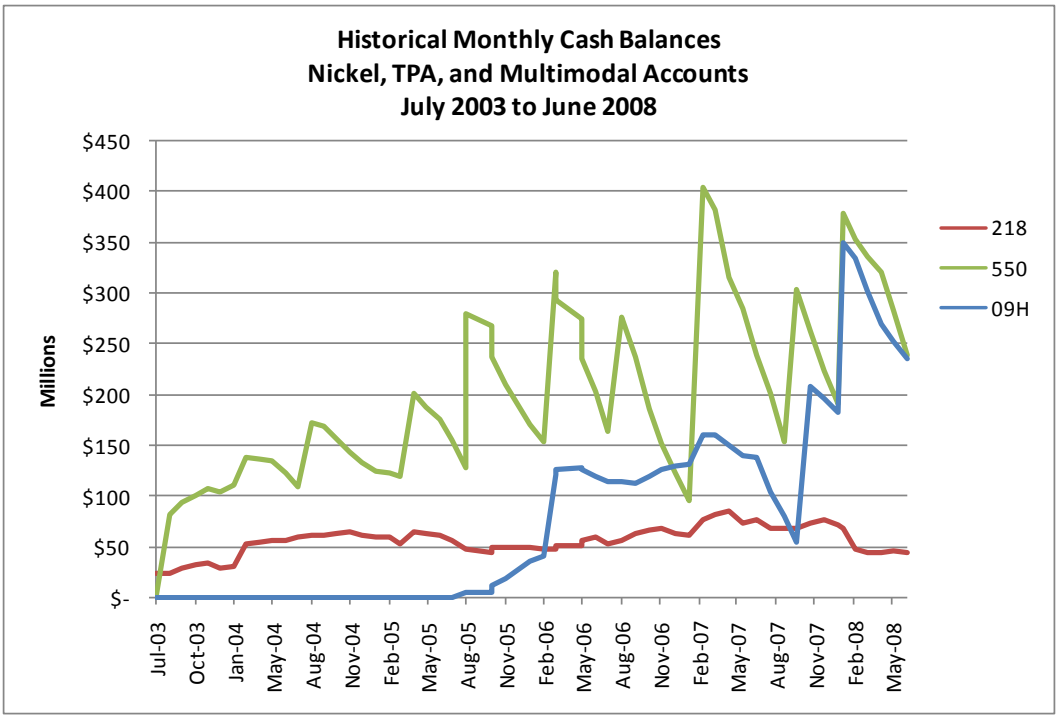




3.2.2. Historical Cash Balances

WSDOT currently maintains relatively large cash balances in several of its major accounts. The largest account (as measured by fund balance), the Nickel Account, has steadily grown over the last three biennia and ended June 2008 with a $238 million balance. The average monthly cash balance in the Nickel Account has increased each year since its inception – from $113 million in FY 2003-04 to $270 million in FY 2007-08.

The following chart shows the average monthly cash balance for the Nickel, TPA, and Multimodal accounts from July 2003 to June 2008.



The large cash balance in the Nickel Account and TPA contrast with the practice of sizing bond issues such that all available cash (other than a minimum fund balance) is used by the end of the biennium. The Nickel Account has ended the last two biennia with balances of $203 million and $238 million, respectively. The TPA ended the most recent biennium with a $235 million balance.

3.3. Impact of Inaccurate Capital Expenditure Projections

The under-spending, or overestimation of capital expenditures can result in two negative fiscal impacts – the State will unnecessarily allocate a portion of its budget to capital expenditures, which will divert resources from other needed purposes, and WSDOT may request the issuance of debt earlier or transfers from other transportation accounts than is needed to fund the overstated capital expenditure projections. The issuance of debt earlier than it is needed results in additional and avoidable interest expense, and depending on the interest earnings rate, can reduce the amount of resources available for the remainder of the 16-Year Transportation Financial Plan.

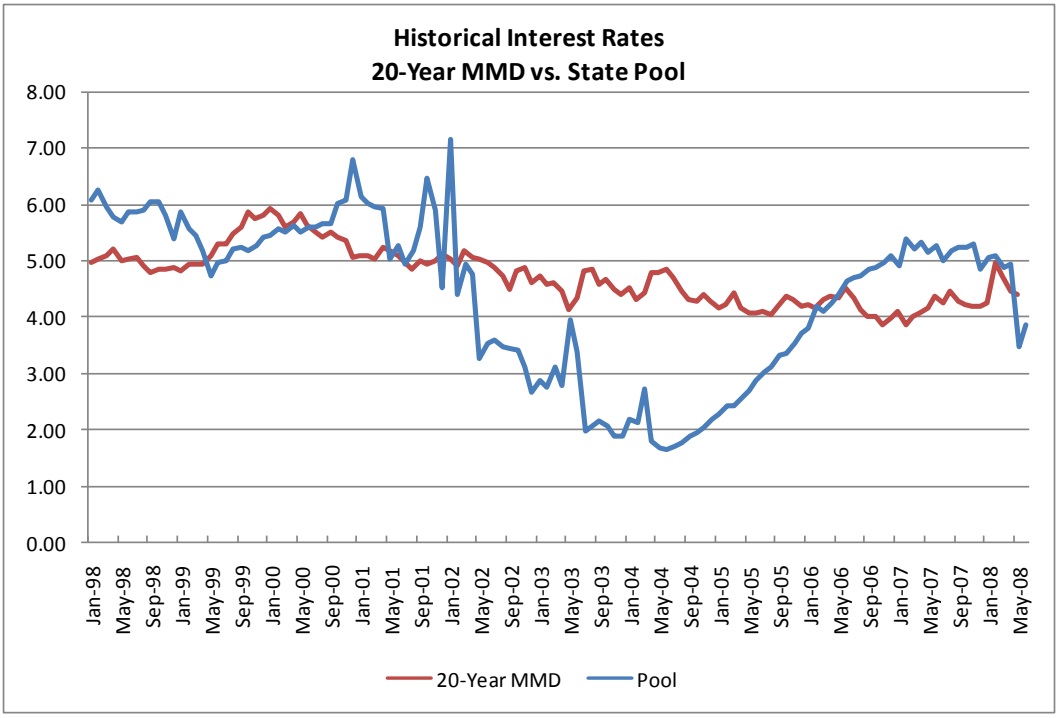
3.3.1. Interest Earnings vs. Interest Expense

The growth in the Nickel Account cash balance and under-spending of budgeted capital expenditures indicates that WSDOT has issued debt earlier than needed, given its intent to issue bonds sufficient only to produce a minimum fund balance. The issuance of debt earlier than it is needed can reduce the amount of resources available in the 16-Year

Transportation Financial Plan, as WSDOT could unnecessarily increase the amount of interest expense, net of interest earnings.

There are periods of time when long-term tax-exempt interest rates are higher than short-term investment rates for state and local government, and the use of tax-exempt debt financing results in a higher cost in comparison to cash. Conversely, long-term tax-exempt interest rates can be lower than short-term investment rates, and the issuance of debt could increase the resources available for the 16-Year Transportation Financial Plan (as WSDOT would earn more interest than the interest cost), all other factors being equal.

As of June 2008, short-term taxable interest rates were low relative to long-term borrowing rates. The State's investment pool yielded 3.86% for June 2008, compared to a 20-year tax-exempt rate (using the Municipal Market Data (MMD) index for a 20-year bond) of 4.55%. However, the historical relationship between short-term taxable and long-term tax-exempt interest rates changes over time. As shown on the following chart of historical investment pool and 20-Year MMD interest rates, tax-exempt debt had a lower interest rate in comparison to cash from May 2006 to May 2008. Short-term taxable interest rates were lower than long-term tax-exempt interest rates from February 2002 to May 2006.



WSDOT invests all of its funds, including MVFT bond proceeds, in the State investment pool. WSDOT receives 80% of the interest earnings on its invested funds.[6] In the event WSDOT issued debt earlier than needed (as a result of capital under-spending), WSDOT would incur interest costs that are currently about 2% higher than the amount of interest earned, as of June 2008.

Interest Earnings in the WSDOT 16-Year Transportation Plan

The WSDOT 16-Year Transportation Plan computer model includes "Treasury Deposit Earnings," which represent interest earnings on WSDOT fund balances. Future estimates of interest earnings are equal to the FY 2007-09 amount. The future estimates of interest earnings are not dependent on future fund balances and do not change, even though the future fund balances change. As shown in the following table, the estimated future Treasury Deposit Earnings for the Nickel Account range from 9.9% to 1,475.3% of the estimated future beginning fund balance.

Estimated Future Treasury Deposit Earnings and Fund Balance
Nickel Account
(In millions)

Biennium	Treasury Deposit Earnings	Beginning Fund Balance	% Beginning Fund Balance
07-09	$22,127	$222,771	9.9%
09-11	22,127	1,500	1,475.3%
11-13	22,127	8,701	254.3%
13-15	22,127	12,182	181.6%
15-17	22,127	11,359	194.8%
17-19	22,127	7,875	281.0%
19-21	22,127	15,808	140.0%
21-23	22,127	4,204	526.4%
23-25	0	36,219	0.0%

The current interest earnings estimate may overstate WSDOT revenue, in the event future estimated fund balances are accurate.

Recommendation 3.5	WSDOT should develop estimates of interest earnings for its various funds that are dependent upon the respective fund balance and an assumed interest earnings rate.

[6] Starting in July 2009, WSDOT will receive 100% of interest earnings from the State investment pool, less a 0.50% charge from the Treasurer's Office.