REQUIRED DISCLOSURE: SCHEDULES FOR DERIVATIVES ARISING FROM INTEREST RATE SWAPS (GASB STATEMENT NO. 53)

Attachment 2

Ohio Public Facilities Commission

Schedules for Derivatives Arising from Interest Rate Swaps

In June 2008, the GASB issued GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments,* which became effective for reporting periods beginning after June 15, 2009. Certain information for the following derivatives entered into in connection with bonds issued by the Ohio Public Facilities Commission is required for the State's financial statements and note disclosures.

Bond Issue	Original Issue Amount	Remaining Issue Amount 6/30/2015	Maturing Through	Swap Term Ending	Туре
Common Schools, Series 2003D	\$67,000,000	\$67,000,000	3/15/24	3/15/24	Floating to Fixed Rate Swap (Counterparty pays variable rate based on 1-month LIBOR)
Common Schools, Series 2005A&B	\$200,000,000	\$112,370,000	3/15/25	3/15/25	Floating to Fixed Rate Swap (Counterparty pays variable rate based on 10-year LIBOR)
Common Schools, Series 2006B&C	\$200,000,000	\$124,410,000	6/15/26	6/15/26	Floating to Fixed Rate Swap (Counterparty pays variable rate based on 1-month LIBOR)
Infrastructure, Series 2001B	\$63,900,000	\$57,100,000	8/1/21	8/1/21	Floating to Fixed Rate Swap (Counterparty pays variable rate based on the SIFMA index)
Infrastructure, Series 2004A	\$58,725,000	\$53,760,000	2/1/23	2/1/23	Floating to Fixed Rate Swap (Counterparty pays variable rate based on 1-month LIBOR)

Attachment 2 (Continued)

Ohio Public Facilities Commission

Schedules for Derivatives Arising from Interest Rate Swaps As of June 30, 2015

Bond Series: Common Schools Variable Rate Bonds, Series 2003D

Notional Amount (GASB 53 ¶69):

Fair Value (GASB 53 ¶69), as of June 30, 2015:

No: X Was the fair value based on quoted market prices? Yes:

If no, please provide a description of the method and significant assumptions used to estimate the fair value of the derivative.

Fair value was determined using the zero-coupon method.

Changes in Fair Value for fiscal year 2015 (GASB 53 ¶69): \$254,399 including accruals.

Associated Debt (GASB 53 ¶74 & 78)

Please report the future debt service requirements and the net cash flow of the derivative, as of June 30, 2015. Please note the interest rate in effect, as of June 30, 2015, should be used to calculate the future interest payments under Column (A).

	Variable-Rate Series					
Year Ending June 30,	Principal	(A) Interest	Total	Interest Rate Swaps, Net	Total	
2016	0	46,900	46,900	2,038,659	2,085,559	
2017	0	46,900	46,900	2,038,659	2,085,559	
2018	0	46,900	46,900	2,038,659	2,085,559	
2019	0	46,900	46,900	2,038,659	2,085,559	
2020	12,600,000	46,900	12,646,900	2,038,659	14,685,559	
2021-2025	54,400,000	96,646	54,496,646	4,201,007	58,697,653	
Total	<u>67,000,000</u>	<u>331,146</u>	<u>67,331,146</u>	<u>14,394,304</u>	<u>81,725,449</u>	

\$(8,655,453) including accruals.

\$67,000,000.

Credit Risk (GASB 53 ¶73a) Please provide the following:

• The credit quality ratings of counterparties as described by nationally recognized statistical rating organizations, as of June 30, 2015 (Moody's/S&P/Fitch).

JPMorgan Chase Bank NA: Aa3/A+/AA-Wells Fargo Bank NA: Aa2/AA-/AA

The maximum amount of loss due to credit risk based on the fair value of the derivative, as of June 30, 2015, that the State would incur if the parties to the derivative failed to perform according to the terms of the contract, without respect to any collateral or other security.

\$0 as the swap had a negative fair value as of June 30, 2015. The fair value of the swap would become positive, exposing the State to credit risk, if interest rates were to rise significantly.

 Information about any master netting arrangements, including a brief description of the arrangement's terms, to mitigate credit risk.

Net payments are allowed only on the same date within the same swap agreement.

Fair Value, net of collateral posted by counterparties and the effects of any master netting agreements, as of June 30, 2015.

\$(8,655,453) including accruals.

• A list of each counterparty and its percentage of the derivative's notional amount, i.e., the extent of the diversification among counterparties.

Wells Fargo and J.P. Morgan Chase Bank are each a counterparty to 50% of the notional amount of this interest rate swap. Of the State's total swap portfolio as of June 30, 2015 of \$414,640,000, the counterparty allocation by notional amount is as follows:

JPMorgan Chase Bank NA – 42.1% Wells Fargo Bank NA – 27.9% Royal Bank of Canada – 15.0% US Bank – 15.0%

Interest Rate Risk (GASB 53 ¶73b)

Please describe any interest rate risk that could adversely affect the fair values of the State's financial instruments or cash flows.

None. The combination of variable rate bonds tied to a floating-to-fixed swap created synthetic fixed rate debt that protects the State from rising interest rates.

Foreign Currency Risk (GASB 53 ¶73g)

Please provide the foreign currency denomination of the derivative, if applicable.

None.

Method of Evaluating Hedge Effectiveness (GASB 53 ¶31-62, 75)

Please provide the method for evaluating the hedge effectiveness of the derivative.

The synthetic instrument method was used to evaluate hedge effectiveness. In fiscal year 2015, the ratio of the synthetic fixed rate to the fixed interest rate under the interest rate swap was 91.1 and, thus, falls within the range of 90-111 percent constituting an effective hedge under the synthetic instrument method.

Is the Hedge Effective at June 30, 2015?

Yes: X No:* ____

<u>* If no, the remainder of these schedules are not applicable and do not need to be completed.</u> However, please provide the requested contact information.

Objective of the Interest Rate Swap (GASB 53 ¶71)

Please briefly explain the objective for the State entering into the derivative, the context needed to understand that objective, and the State's strategies for achieving the objective.

On August 25, 2005, the State entered into a forward starting synthetic fixed rate LIBOR swap, effective September 14, 2007, in connection with the Common Schools Series 2003D Variable Rate Bonds. The purpose of the swap was to lock in the then current low interest rates for the long-dated serial bonds maturing March 15, 2020-2024. The State entered into two identical swaps of \$33.5 million with JPMorgan and Morgan Stanley. The Swap with Morgan Stanley was novated to Wells Fargo in February 2014. The variable-receiver rate on the swap is based on the LIBOR index (65% of 1-month LIBOR + 25 basis points) and the State pays a fixed rate of 3.414% to the counterparties. The swap enabled the State to lock in a low borrowing cost on its variable rate bonds.

Significant Terms (GASB 53 ¶72)

Please provide the following, as may be applicable:

Outgoing swap interest rate at June 30, 2015:	3.414% (fixed payer rate).
Incoming swap interest rate at June 30, 2015:	0.3712% (variable rate based on 65% of the 1-month LIBOR plus 25 basis points).
Net swap interest rate at June 30, 2015:	3.0428%.

Underlying indexes or interest rates:	London Inter-Bank Offer Rate (LIBOR).
Date(s) when the derivative became effective:	September 14, 2007.
Date(s) when the derivative is scheduled to terminate or mature:	March 15, 2024.
Amount of cash paid or received when the derivative was initiated:	\$- <i>0</i>
Options embedded in the derivative:	None.

Basis Risk (GASB 53 ¶73c)

Please describe any basis risk involving the derivative when variable interest rates and an associated bond or other interest-paying financial instrument are based on different indexes (e.g., SIFMA versus LIBOR).

The swap exposes the State to basis risk or a mismatch between the variable rate paid on the underlying bonds and the variable rate receipt from the swap. A mismatch would increase or decrease the interest cost paid by the State. Given that the variable swap receipt is based on a taxable index (1-month LIBOR), the State assumes the risk of adverse changes in the traditional relationship between taxable and tax-exempt rates, including for example, reductions in marginal federal tax rates or elimination of the tax preference for municipal debt. Those changes may increase the interest rates on the underlying variable rate debt but would not impact the variable rate swap receipt based on the LIBOR index.

Termination Risk (GASB 53 ¶73d)

Please describe any termination risk if the derivative's unscheduled end could affect the State's asset/liability strategy or present the State with potentially significant unscheduled termination payments to the counterparty. In the description, please include any termination events that have occurred, dates that the derivative may be terminated, and any out-of-the-ordinary termination events contained in the contractual documents.

The State retains the right to terminate the swap agreement at the market value prior to maturity. The State has termination risk under the contract particularly upon the occurrence of an Additional Termination Event (ATE) as defined in the swap documents. An ATE occurs if either the credit rating of the bonds associated with the swap, or the credit rating of the swap counterparty falls below a threshold defined in each swap agreement. If the swap is terminated, the State's variable rate exposure on the bonds would no longer be converted to a synthetic fixed interest rate. Also, if a swap termination were to occur at a time when the swap had a negative fair value, the State may be liable to the counterparty for a payment. Other termination events include failure to pay, bankruptcy, merger without assumption, and illegality. All of the aforementioned termination events are ordinary provisions in the current market. No termination events have occurred.

Rollover Risk (GASB 53 ¶73e)

Please describe any rollover risk if the derivative associated with the State's debt does not extend to the maturity of the debt. In the description, please disclose the maturity of the derivative and the maturity of the associated debt.

None. The expiration date of the swap is the same as the maturity date of the bonds.

Market-access Risk (GASB 53 ¶73f)

Please describe any risk the State may have relative to its ability to enter credit markets or that credit will become more costly.

None.

Prepared by: Cassie Sanfrey Phone Number: 614-728-8414 Date: August 12, 2015 E-Mail Address: <u>cassie.sanfrey@obm.state.oh.us</u> Source(s) of Information Used to Complete Schedule: Swap Confirms, Debt Service Schedules, Bloomberg Index Rates provided by Treasurer of State, and Swap Financial Group Counterparty Ratings

Attachment 2 (Continued)

Ohio Public Facilities Commission

Schedules for Derivatives Arising from Interest Rate Swaps As of June 30, 2015

Bond Series: Common Schools Variable Rate Bonds, Series 2005A & 2005B

Notional Amount (GASB 53 ¶69):	\$112,370,000
Fair Value (GASB 53 ¶69), as of June 30, 2015:	\$(11,197,494) including accruals.
Was the fair value based on quoted market prices?	Yes: No: X_

If no, please provide a description of the method and significant assumptions used to estimate the fair value of the derivative.

Fair value was determined using the zero-coupon method.

Changes in Fair Value for fiscal year 2015 (GASB 53 ¶69): \$654,829 including accruals.

Associated Debt (GASB 53 ¶74 & 78)

Please report the future debt service requirements and the net cash flow of the derivative, as of June 30, 2015. Please note the interest rate in effect, as of June 30, 2015, should be used to calculate the future interest payments under Column (A).

	Variable-Rate Series					
Year Ending June 30,	Principal	(A) Interest	Total	Interest Rate Swaps, Net	Total	
2016 2017 2018 2019 2020 2021-2025	9,720,000 10,000,000 10,300,000 10,620,000 10,980,000 60,750,000	78,659 71,855 64,855 57,645 50,211 130,459	9,798,659 10,071,855 10,364,855 10,677,645 11,030,211 60,880,459	2,501,401 2,285,030 2,062,426 1,833,144 1,596,738 4,148,671	12,300,060 12,356,885 12,427,281 12,510,789 12,626,949 65,029,130	
Total	112,370,000	453,684	112,823,684	14,427,410	127,251,094	

Credit Risk (GASB 53 ¶73a) Please provide the following:

• The credit quality ratings of counterparties as described by nationally recognized statistical rating organizations, as of June 30, 2015 (Moody's/S&P/Fitch).

JPMorgan Chase Bank NA: Aa3/A+/AA-

 The maximum amount of loss due to credit risk based on the fair value of the derivative, as of June 30, 2015, that the State would incur if the parties to the derivative failed to perform according to the terms of the contract, without respect to any collateral or other security.

\$0 as the swap had a negative fair value as of June 30, 2015. The fair value of the swap would become positive, exposing the State to credit risk, if interest rates were to rise significantly.

 Information about any master netting arrangements, including a brief description of the arrangement's terms, to mitigate credit risk.

Net payments are allowed only on the same date within the same swap agreement.

• Fair Value, net of collateral posted by counterparties and the effects of any master netting agreements, as of June 30, 2015.

\$(11,197,494) including accruals.

A list of each counterparty and its percentage of the derivative's notional amount, i.e., the extent of the diversification among counterparties.

JPMorgan Chase Bank is counterparty to 100% of the notional amount of this interest rate swap. Of the State's total swap portfolio as of June 30, 2015 of \$414,640,000, the counterparty allocation by notional amount is as follows:

JPMorgan Chase Bank NA – 42.1% Wells Fargo Bank NA – 27.9% Royal Bank of Canada – 15.0% US Bank – 15.0%

Interest Rate Risk (GASB 53 ¶73b)

Please describe any interest rate risk that could adversely affect the fair values of the State's financial instruments or cash flows.

None. The combination of variable rate bonds tied to a floating-to-fixed swap created synthetic fixed rate debt that protects the State from rising interest rates.

Foreign Currency Risk (GASB 53 ¶73g)

Please provide the foreign currency denomination of the derivative, if applicable.

None.

Method of Evaluating Hedge Effectiveness (GASB 53 ¶31-62, 75)

Please provide the method for evaluating the hedge effectiveness of the derivative.

Per GASB Statement No. 53 and associated guidance, evaluation of hedge effectiveness should not be performed if the hedge was determined to be ineffective in a prior period. This hedge was determined to be ineffective in fiscal year 2011 and thus must continue to be treated as ineffective over its remaining life through June 2025.

Is the Hedge Effective at June 30, 2015?

Yes: No:* X

<u>* If no, the remainder of these schedules are not applicable and do not need to be completed.</u> However, please provide the requested contact information.

Objective of the Interest Rate Swap (GASB 53 ¶71)

Please briefly explain the objective for the State entering into the derivative, the context needed to understand that objective, and the State's strategies for achieving the objective.

The purpose of this swap was to lock in the then current low interest rates for long-dated serial bonds maturing on March 15, 2006-2025. The fixed rate achievable under the interest rate swap agreement was significantly lower than the fixed rate achievable via the issuance of traditional fixed rate bonds. Note, the variable rate receipt component of this swap has been amended three times. Effective March 15, 2007, the State converted the variable rate swap receipt from SIFMA to 62% of 10-Year LIBOR (i.e., a 10-Year LIBOR constant maturity swap (CMS)). The purpose of this amendment was to take advantage of the then current flat yield curve by switching to a longer-dated variable rate receipt that would outperform SIFMA over the longterm, while enabling the State to reduce its fixed rate payment under the swap from 4.081% to 3.75%. Effective January 15, 2008 to March 15, 2010, the State adjusted the variable rate swap receipt from the 10-year LIBOR-basis to a 1-month LIBOR-basis to monetize the value between 10-year and 1-month basis via an upfront payment to the State. Effective March 15, 2011 to September 15, 2014, the State again adjusted the variable rate swap receipt from the 10-year LIBOR-basis to a 1-month LIBOR-basis in exchange for an upfront payment compensating the State for adjusting its variable receipt to a shorter LIBOR benchmark. In all of these amendments, no other terms or conditions were modified.

Significant Terms (GASB 53 ¶72) Please provide the following, as may be applicable:

Outgoing swap interest rate at June 30, 2015:	3.750% (fixed payer rate).
Incoming swap interest rate at June 30, 2015:	1.524% (variable rate based on 62% of the 10-year LIBOR).
Net swap interest rate at June 30, 2015:	2.226%.
Underlying indexes or interest rates:	London Inter-Bank Offer Rate (LIBOR).
Date(s) when the derivative became effective:	April 1, 2005.
Date(s) when the derivative is scheduled to terminate or mature:	March 15, 2025.
Amount of cash paid or received when the derivative was initiated:	\$- <i>0</i>
Options embedded in the derivative:	None.

Basis Risk (GASB 53 ¶73c)

Please describe any basis risk involving the derivative when variable interest rates and an associated bond or other interest-paying financial instrument are based on different indexes (e.g., SIFMA versus LIBOR).

The swap exposes the State to basis risk or a mismatch between the variable rate paid on the underlying bonds and the variable rate receipt from the swap. A mismatch would increase or decrease the interest cost paid by the State. As a result of the variable swap receipt being based on a long-dated taxable index (10-Year LIBOR), the State assumes two identifiable risks: i) an adverse change in the traditional relationship between taxable and tax-exempt interest rates, including for example, the risk of reductions in marginal federal tax rates or elimination of the tax preference for municipal securities; and ii) the LIBOR yield curve being flat or inverted for extended periods of time. Any reduction in federal tax rates would increase the interest rates on the underlying variable rate debt but would not impact the variable rate swap receipt based on the LIBOR index. A flat or inverted LIBOR yield curve would likely result in shortfall between the variable rate swap receipt and the payments on the associated variable rate bonds.

Termination Risk (GASB 53 ¶73d)

Please describe any termination risk if the derivative's unscheduled end could affect the State's asset/liability strategy or present the State with potentially significant unscheduled termination payments to the counterparty. In the description, please include any termination events that have occurred, dates that the derivative may be terminated, and any out-of-the-ordinary termination events contained in the contractual documents.

The State retains the right to terminate the swap agreement at the market value prior to maturity. The State has termination risk under the contract particularly upon the occurrence of an Additional Termination Event (ATE) as defined in the swap documents. An ATE occurs if either the credit rating of the bonds associated with a specific swap, or the credit rating of the swap counterparty falls below a threshold defined in each swap agreement. If the swap is terminated, the State's variable rate exposure on the bonds would no longer be converted to a synthetic fixed interest rate. Also, if a swap termination were to occur and the swap had a negative fair value, the State may be liable to the counterparty for a payment. Other termination events include failure to pay, bankruptcy, merger without assumption, and illegality. All of the aforementioned termination events are ordinary provisions in the current market. No termination events have occurred.

Rollover Risk (GASB 53 ¶73e)

Please describe any rollover risk if the derivative associated with the State's debt does not extend to the maturity of the debt. In the description, please disclose the maturity of the derivative and the maturity of the associated debt.

None. The expiration date of the swap is the same as the maturity date of the bonds.

Market-access Risk (GASB 53 ¶73f)

Please describe any risk the State may have relative to its ability to enter credit markets or that credit will become more costly.

None.

Prepared by: Cassie Sanfrey

Phone Number: 614-728-8414 Date: August 12, 2015

E-Mail Address: <u>cassie.sanfrey@obm.state.oh.us</u>

Source(s) of Information Used to Complete Schedule: Swap Confirms, Debt Service Schedules, Bloomberg Index Rates provided by Treasurer of State, and Swap Financial Group Counterparty Ratings

Attachment 2 (Continued)

Ohio Public Facilities Commission

Schedules for Derivatives Arising from Interest Rate Swaps As of June 30, 2015

Bond Series: Common Schools Variable Rate Bonds, 2006B & 2006C

Notional Amount (GASB 53 ¶69):	\$124,410,000)
Fair Value (GASB 53 ¶69), as of June 30, 2015:	\$(12,255,405)) including accruals.
Was the fair value based on quoted market prices?	Yes:	No: X

If no, please provide a description of the method and significant assumptions used to estimate the fair value of the derivative.

Fair value was determined using the zero-coupon method.

Changes in Fair Value for fiscal year 2015 (GASB 53 ¶69): \$752,997 including accruals.

Associated Debt (GASB 53 ¶74 & 78)

Please report the future debt service requirements and the net cash flow of the derivative, as of June 30, 2015. Please note the interest rate in effect, as of June 30, 2015, should be used to calculate the future interest payments under Column (A).

	Varia	able-Rate Se	ries		
Year Ending June 30,	Principal	(A) Interest	Total	Interest Rate Swaps, Net	Total
2016 2017 2018 2019 2020 2021-2025	9,420,000 9,720,000 10,050,000 10,400,000 10,770,000 60,430,000	87,087 80,493 73,689 66,654 59,374 177,877	9,507,087 9,800,493 10,123,689 10,466,654 10,829,374 60,607,877	3,521,767 3,255,108 2,979,957 2,695,464 2,401,063 7,193,282	13,028,854 13,055,601 13,103,646 13,162,118 13,230,437 67,801,159
2026-2030	<u>13,620,000</u>	<u>9,534</u>	<u>13,629,534</u>	<u>385,552</u>	<u>14,015,086</u>
Total	124,410,000	554,708	124,964,708	22,432,193	147,396,901

Credit Risk (GASB 53 ¶73a)

Please provide the following:

• The credit quality ratings of counterparties as described by nationally recognized statistical rating organizations, as of June 30, 2015 (Moody's/S&P/Fitch).

US Bank National Association: A1/AA-/AA-Royal Bank of Canada: Aa3/AA-/AA

 The maximum amount of loss due to credit risk based on the fair value of the derivative, as of June 30, 2015, that the State would incur if the parties to the derivative failed to perform according to the terms of the contract, without respect to any collateral or other security.

\$0 as the swap had a negative fair value as of June 30, 2015. The fair value of the swap would become positive, exposing the State to credit risk, if interest rates were to rise significantly.

• Information about any master netting arrangements, including a brief description of the arrangement's terms, to mitigate credit risk.

Net payments are allowed only on the same date within the same swap agreement.

• Fair Value, net of collateral posted by counterparties and the effects of any master netting agreements, as of June 30, 2015.

\$(12,255,405), including accruals.

• A list of each counterparty and its percentage of the derivative's notional amount, i.e., the extent of the diversification among counterparties.

US Bank and Royal Bank of Canada are each counterparty to 50% of the notional amount of this interest rate swap. Of the State's total swap portfolio as of June 30, 2015 of \$414,640,000, the counterparty allocation by notional amount is as follows:

JPMorgan Chase Bank NA – 42.1% Wells Fargo Bank NA – 27.9% Royal Bank of Canada – 15.0% US Bank – 15.0%

Interest Rate Risk (GASB 53 ¶73b)

Please describe any interest rate risk that could adversely affect the fair values of the State's financial instruments or cash flows.

None. The combination of variable rate bonds and a floating-to-fixed swap created synthetic fixed rate debt that protects the State from rising interest rates.

Foreign Currency Risk (GASB 53 ¶73g)

Please provide the foreign currency denomination of the derivative, if applicable.

None.

Method of Evaluating Hedge Effectiveness (GASB 53 ¶31-62, 75)

Please provide the method for evaluating the hedge effectiveness of the derivative.

The synthetic instrument method was used to evaluate hedge effectiveness. In fiscal year 2015, the ratio of the synthetic fixed rate to the fixed interest rate under the interest rate swap was 90.1 and, thus, falls within the range of 90-111 percent constituting an effective hedge under the synthetic instrument method.

Is the Hedge Effective at June 30, 2015?

Yes: X No:* ____

<u>* If no, the remainder of these schedules are not applicable and do not need to be completed.</u> However, please provide the requested contact information.

Objective of the Interest Rate Swap (GASB 53 ¶71)

Please briefly explain the objective for the State entering into the derivative, the context needed to understand that objective, and the State's strategies for achieving the objective.

On June 1, 2005, the State entered into a forward starting synthetic fixed rate LIBOR swap (effective June 15, 2006) in connection with both series of bonds. The purpose of the swap was to lock in the then current low interest rates for bonds that were scheduled to sell in June 2006. The fixed rate achievable under this forward starting interest rate swap agreement was expected to be significantly lower than the fixed rate achievable via the later issuance of traditional fixed rate bonds. The State entered into two identical swaps for \$100 million each with UBS AG and Royal Bank of Canada. The swap with UBS AG was novated to US Bank in November 2014 The variable-receiver rate on the swap is based on the LIBOR index (65% of 1-month LIBOR + 25 basis points) and the State pays a fixed rate of 3.202% to the counterparties.

Significant Terms (GASB 53 ¶72)

Please provide the following, as may be applicable:

Outgoing swap interest rate at June 30, 2015:	3.202% (fixed payer rate).
Incoming swap interest rate at June 30, 2015:	0.3712% (variable rate based on 65% of the 1-month LIBOR plus 25 basis points).
Net swap interest rate at June 30, 2015:	2.8308%.

Underlying indexes or interest rates:	London Inter-Bank Offer Rate (LIBOR).
Date(s) when the derivative became effective:	June 15, 2006.
Date(s) when the derivative is scheduled to terminate or mature:	June 15, 2026.
Amount of cash paid or received when the derivative was initiated:	\$- <i>0</i>
Options embedded in the derivative:	None.

Basis Risk (GASB 53 ¶73c)

Please describe any basis risk involving the derivative when variable interest rates and an associated bond or other interest-paying financial instrument are based on different indexes (e.g., SIFMA versus LIBOR).

The swap exposes the State to basis risk or a mismatch between the variable rate paid on the underlying bonds and the variable rate receipt from the swap. A mismatch would increase or decrease the interest cost paid by the State. Given that the variable swap receipt is based on a taxable index (LIBOR), the State assumes the risk of adverse changes in the traditional relationship between taxable and tax-exempt interest rates, including for example, reductions in marginal federal tax rates or elimination of the tax preference for municipal securities. Those changes may increase the interest rates on the underlying variable rate debt but would not impact the variable rate swap receipt based on the LIBOR index.

Termination Risk (GASB 53 ¶73d)

Please describe any termination risk if the derivative's unscheduled end could affect the State's asset/liability strategy or present the State with potentially significant unscheduled termination payments to the counterparty. In the description, please include any termination events that have occurred, dates that the derivative may be terminated, and any out-of-the-ordinary termination events contained in the contractual documents.

The State retains the right to terminate the swap agreement at the market value prior to maturity. The State has termination risk under the contract particularly upon the occurrence of an Additional Termination Event (ATE) as defined in the swap documents. An ATE occurs if either the credit rating of the bonds associated with a specific swap, or the credit rating of the swap counterparty falls below a threshold defined in each swap agreement. If the swap is terminated, the State's variable rate exposure on the bonds would no longer be converted to a synthetic fixed interest rate. Also, if a swap termination were to occur and the swap has a negative fair value, the State may be liable to the counterparty for a payment. Other termination events include failure to pay, bankruptcy, merger without assumption, and illegality. All of the aforementioned termination events are ordinary provisions in the current market. No termination events have occurred.

Rollover Risk (GASB 53 ¶73e)

Please describe any rollover risk if the derivative associated with the State's debt does not extend to the maturity of the debt. In the description, please disclose the maturity of the derivative and the maturity of the associated debt.

None. The expiration date of the swap is the same as the maturity date of the bonds.

Market-access Risk (GASB 53 ¶73f)

Please describe any risk the State may have relative to its ability to enter credit markets or that credit will become more costly.

None.

Prepared by: Cassie Sanfrey Phone Number: 614-728-8414 Date: August 12, 2015 E-Mail Address: <u>cassie.sanfrey@obm.state.oh.us</u> Source(s) of Information Used to Complete Schedule: Swap Confirms, Debt Service Schedules, Bloomberg Index Rates provided by Treasurer of State, and Swap Financial Group Counterparty Ratings

Attachment 2 (Continued)

Ohio Public Facilities Commission

Schedules for Derivatives Arising from Interest Rate Swaps As of June 30, 2015

Bond Series: Infrastructure Variable Rate Bonds, Series 2001B

Notional Amount (GASB 53 ¶69):

\$57,100,000

\$(7,697,323) *including accruals.*

No: X

Fair Value (GASB 53 ¶69), as of June 30, 2015:

Was the fair value based on quoted market prices? Yes: ____

If no, please provide a description of the method and significant assumptions used to estimate the fair value of the derivative.

Fair value was determined using the zero-coupon method.

Changes in Fair Value for fiscal year 2015 (GASB 53 ¶69): \$1,600,961 including accruals.

Associated Debt (GASB 53 ¶74 & 78)

Please report the future debt service requirements and the net cash flow of the derivative, as of June 30, 2015. Please note the interest rate in effect, as of June 30, 2015, should be used to calculate the future interest payments under Column (A).

	Variable-Rate Series				
Year Ending June 30,	Principal	(A) Interest	Total	Interest Rate Swaps, Net	Total
2016 2017	7,100,000 7,400,000	37,485 32,410	7,137,485 7,432,410	2,441,880 2,111,280	9,579,365 9,543,690
2018 2019 2020	7,800,000 8,100,000 8,500,000	27,090 21,525 15,715	7,827,090 8,121,525 8,515,715	1,764,720 1,402,200 1,023,720	9,591,810 9,523,725 9,539,435
2021-2025	<u>18,200,000</u>	<u>12,880</u>	<u>18,212,880</u>	<u>839,040</u>	<u>19,051,920</u>
Total	57,100,000	147,105	57,247,105	9,582,840	66,829,945

Credit Risk (GASB 53 ¶73a) Please provide the following:

• The credit quality ratings of counterparties as described by nationally recognized statistical rating organizations, as of June 30, 2015 (Moody's/S&P/Fitch).

JPMorgan Chase Bank NA: Aa3/A+/AA-Wells Fargo Bank NA: Aa2/AA-/AA

The maximum amount of loss due to credit risk based on the fair value of the derivative, as of June 30, 2015, that the State would incur if the parties to the derivative failed to perform according to the terms of the contract, without respect to any collateral or other security.

\$0 as the swap had a negative fair value as of June 30, 2015. The fair value of the swap would become positive, exposing the State to credit risk, if interest rates were to rise significantly.

• Information about any master netting arrangements, including a brief description of the arrangement's terms, to mitigate credit risk.

Net payments are allowed only on the same date within the same swap agreement.

Fair Value, net of collateral posted by counterparties and the effects of any master netting agreements, as of June 30, 2015.

\$(7,697,323) including accruals.

A list of each counterparty and its percentage of the derivative's notional amount, i.e., the extent of the diversification among counterparties.

Wells Fargo (via novation from Morgan Stanley in February 2014) and J.P. Morgan Chase Bank are each counterparty to 50% of the notional amount of this interest rate swap. Of the State's total swap portfolio as of June 30, 2015 of \$414,640,000, the counterparty allocation by notional amount is as follows:

JPMorgan Chase Bank NA – 42.1% Wells Fargo Bank NA – 27.9% Royal Bank of Canada – 15.0% US Bank – 15.0%

Interest Rate Risk (GASB 53 ¶73b)

Please describe any interest rate risk that could adversely affect the fair values of the State's financial instruments or cash flows.

None. The combination of variable rate bonds and a floating-to-fixed swap created synthetic fixed rate debt that protects the State from rising interest rates. However, JP Morgan has the right to cancel its 50% of the swap if the 180-day average of SIFMA Index exceeds 7.0%. In the unlikely event this threshold was triggered and if JPM exercised its cancellation option, the State would be exposed to floating interest rates at a time in which those rates are high relative to historical averages.

Foreign Currency Risk (GASB 53 ¶73g)

Please provide the foreign currency denomination of the derivative, if applicable.

None.

Method of Evaluating Hedge Effectiveness (GASB 53 ¶31-62, 75)

Please provide the method for evaluating the hedge effectiveness of the derivative.

The consistent critical terms method was applied to evaluate hedge effectiveness. The State's variable rate bonds and the variable rate swap receipts based on the SIFMA index both reflect a tax-exempt basis. Additionally, the bonds and swap have consistent notional amounts, rate reset frequency and rate reset dates; thus, this swap constitutes an effective hedge under the consistent critical terms method.

Is the Hedge Effective at June 30, 2015?

Yes: X No:* ____

<u>* If no, the remainder of these schedules are not applicable and do not need to be completed.</u> However, please provide the requested contact information.

Objective of the Interest Rate Swap (GASB 53 ¶71)

Please briefly explain the objective for the State entering into the derivative, the context needed to understand that objective, and the State's strategies for achieving the objective.

The State entered into a synthetic fixed rate SIFMA swap in connection with the issuance of its Series 2001B Bonds. The purpose of the swap was to lock in the then current low interest rates for bonds issued in November 2001 and maturing serially in August 2015-2021. The fixed rate achievable under this interest rate swap agreement was significantly lower than the fixed rate achievable via the issuance of traditional fixed rate bonds. The variable-receiver rate on the swap is based on the SIFMA index and the State pays a fixed rate of 4.63% to the counterparties.

Significant Terms (GASB 53 ¶72) Please provide the following, as may be applicable:

Outgoing swap interest rate at June 30, 2015:	4.630% (fixed payer rate).
Incoming swap interest rate at June 30, 2015:	0.07% (variable rate based on the SIFMA Index).
Net swap interest rate at June 30, 2015:	4.560%.
Underlying indexes or interest rates:	SIFMA Index.
Date(s) when the derivative became effective:	November 29, 2001.
Date(s) when the derivative is scheduled to terminate or mature:	August 1, 2021.
Amount of cash paid or received when the derivative was initiated:	\$-O
Options embedded in the derivative:	JPMorgan Chase Bank may elect to terminate its portion of the swap if the SIFMA index averages 7.0% or higher over a 180-day period.

Basis Risk (GASB 53 ¶73c)

Please describe any basis risk involving the derivative when variable interest rates and an associated bond or other interest-paying financial instrument are based on different indexes (e.g., SIFMA versus LIBOR).

The swap exposes the State to basis risk or a mismatch between the variable rate paid on the underlying bonds and the variable rate received on the swap. A mismatch would increase or decrease the interest cost paid by the State. The SIFMA municipal swap index has proven to be an effective proxy for the State's variable-rate debt and thus effectively mitigates basis risk.

Termination Risk (GASB 53 ¶73d)

Please describe any termination risk if the derivative's unscheduled end could affect the State's asset/liability strategy or present the State with potentially significant unscheduled termination payments to the counterparty. In the description, please include any termination events that have occurred, dates that the derivative may be terminated, and any out-of-the-ordinary termination events contained in the contractual documents.

The State retains the right to terminate the swap agreement at the market value prior to maturity. The State has termination risk under the contract particularly upon the occurrence of an Additional Termination Event (ATE) as defined in the swap documents. An ATE occurs if either the credit rating of the bonds associated with a specific swap, or the credit rating of the swap counterparty falls below a threshold defined in each swap agreement. If the swap is terminated, the State's variable rate exposure on the bonds would no longer be converted to a synthetic fixed interest rate. Also, if a swap termination were to occur and the swap had a negative fair value, the State may be liable to the counterparty for a payment. Other termination events include failure to pay, bankruptcy, merger without assumption, and illegality. All of the aforementioned termination events are ordinary provisions in current market. No termination events have occurred.

Rollover Risk (GASB 53 ¶73e)

Please describe any rollover risk if the derivative associated with the State's debt does not extend to the maturity of the debt. In the description, please disclose the maturity of the derivative and the maturity of the associated debt.

None. The expiration date of the swap is the same as the maturity date of the bonds.

Market-access Risk (GASB 53 ¶73f)

Please describe any risk the State may have relative to its ability to enter credit markets or that credit will become more costly.

None.

Prepared by: Cassie Sanfrey Phone Number: 614-728-8414 Date: August 12, 2015

E-Mail Address: cassie.sanfrey@obm.state.oh.us

Source(s) of Information Used to Complete Schedule: Swap Confirms, Debt Service Schedules, Bloomberg Index Rates provided by Treasurer of State, and Swap Financial Group Counterparty Ratings

Attachment 2 (Continued)

Ohio Public Facilities Commission

Schedules for Derivatives Arising from Interest Rate Swaps As of June 30, 2015

Bond Series: Infrastructure Variable Rate Bonds, Series 2004A

Notional Amount (GASB 53 ¶69):	\$53,760,000.	
Fair Value (GASB 53 ¶69), as of June 30, 2015:	\$(6,067,020)	including accruals.
Was the fair value based on quoted market prices?	Yes:	No: <u>X</u>
If no please provide a description of the method and signif	icant assumpti	ons used to estima

If no, please provide a description of the method and significant assumptions used to estimate the fair value of the derivative.

Fair value was determined using the zero-coupon method.

Changes in Fair Value for fiscal year 2015 (GASB 53 ¶69): \$751,982 including accruals.

Associated Debt (GASB 53 ¶74 & 78)

Please report the future debt service requirements and the net cash flow of the derivative, as of June 30, 2015. Please note the interest rate in effect, as of June 30, 2015, should be used to calculate the future interest payments under Column (A).

	Variable-Rate Series				
Year Ending June 30,	Principal	(A) Interest	Total	Interest Rate Swaps, Net Total	Total
2016 2017 2018 2019 2020 2021-2025	420,000 6,585,000 7,095,000 7,285,000 7,615,000 24,760,000	37,632 37,338 32,729 27,762 22,663 <u>35,140</u>	457,632 6,622,338 7,127,729 7,312,762 7,637,663 <u>24,795,140</u>	1,689,411 1,676,212 1,469,278 1,246,317 1,017,386 <u>1,577,538</u>	2,147,043 8,298,550 8,597,007 8,559,079 8,655,048 <u>26,372,678</u>
Total	53,760,000	193,263	53,953,263	8,676,142	62,629,405

Credit Risk (GASB 53 ¶73a) Please provide the following:

• The credit quality ratings of counterparties as described by nationally recognized statistical rating organizations, as of June 30, 2015 (Moody's/S&P/Fitch).

Wells Fargo Bank NA: Aa2/AA-/AA

 The maximum amount of loss due to credit risk based on the fair value of the derivative, as of June 30, 2015, that the State would incur if the parties to the derivative failed to perform according to the terms of the contract, without respect to any collateral or other security.

\$0 as the swap had a negative fair value as of June 30, 2015. The fair value of the swap would become positive, exposing the State to credit risk, if interest rates were to rise significantly.

 Information about any master netting arrangements, including a brief description of the arrangement's terms, to mitigate credit risk.

Net payments are allowed only on the same date within the same swap agreement.

Fair Value, net of collateral posted by counterparties and the effects of any master netting agreements, as of June 30, 2015.

\$(6,067,020) including accruals.

• A list of each counterparty and its percentage of the derivative's notional amount, i.e., the extent of the diversification among counterparties.

Wells Fargo is counterparty to 100% of the notional amount of this interest rate swap. The swap was novated to Wells Fargo from Morgan Stanley in February 2014. Of the State's total swap portfolio as of June 30, 2015 of \$414,640,000, the counterparty allocation by notional amount is as follows:

JPMorgan Chase Bank NA – 42.1% Wells Fargo Bank NA – 27.9% Royal Bank of Canada – 15.0% US Bank – 15.0%

Interest Rate Risk (GASB 53 ¶73b)

Please describe any interest rate risk that could adversely affect the fair values of the State's financial instruments or cash flows.

The combination of variable rate bonds and a floating-to-fixed swap created synthetic fixed rate debt for the State. The synthetic fixed rate debt protects the State from rising interest rates.

Foreign Currency Risk (GASB 53 ¶73g)

Please provide the foreign currency denomination of the derivative, if applicable.

None.

Method of Evaluating Hedge Effectiveness (GASB 53 ¶31-62, 75)

Please provide the method for evaluating the hedge effectiveness of the derivative.

The synthetic instrument method requires that the formulas for computing net settlements under the derivative instrument be the same for each net settlement through maturity. Given that the formula for computing counterparty payments to the State under this derivative switches to an alternative formula if the weighted average of the LIBOR index over the calculation period exceeds 5.0%, the synthetic instrument method cannot be used. For this interest rate swap, the regression method was used and resulted in an R-squared of 0.95 and met the statistical significance and slope coefficient requirements necessary to consider this hedge effective.

Is the Hedge Effective at June 30, 2015?

Yes: X_ No:* ____

<u>* If no, the remainder of these schedules are not applicable and do not need to be completed.</u> However, please provide the requested contact information.

Objective of the Interest Rate Swap (GASB 53 ¶71)

Please briefly explain the objective for the State entering into the derivative, the context needed to understand that objective, and the State's strategies for achieving the objective.

The State entered into a floating-to-fixed rate LIBOR swap in connection with the March 2004 issuance of its Infrastructure Series 2004A Bonds. The combination of variable rate bonds and a floating-to-fixed swap created low-cost, long-term synthetic fixed rate debt to meet the State's objective of minimizing interest expense. The fixed rate achievable under this interest rate swap agreement was significantly lower than the fixed rate achievable via the issuance of traditional fixed rate bonds. The variable-receiver rate on the swap is based on the LIBOR index and the State pays a fixed rate of 3.510% to the counterparty.

Significant Terms (GASB 53 ¶72)

Please provide the following, as may be applicable:

Outgoing swap interest rate at June 30, 2015:	3.510% (fixed payer rate).
Incoming swap interest rate at June 30, 2015:	0.3675% (based on 63% of LIBOR + 25 basis points).
Net swap interest rate at June 30, 2015:	3.1425%.

Underlying indexes or interest rates:	London Inter-Bank Offer Rate (LIBOR).
Date(s) when the derivative became effective:	March 3, 2004.
Date(s) when the derivative is scheduled to terminate or mature:	February 1, 2023.
Amount of cash paid or received when the derivative was initiated:	\$- <i>0</i>
Options embedded in the derivative:	None.

Basis Risk (GASB 53 ¶73c)

Please describe any basis risk involving the derivative when variable interest rates and an associated bond or other interest-paying financial instrument are based on different indexes (e.g., SIFMA versus LIBOR).

The swap exposes the State to basis risk or a mismatch between the variable rate paid on the underlying bonds and the variable rate receipt from the swap. A mismatch would increase or decrease the interest cost paid by the State. Given that the variable swap receipt is based on a taxable index (LIBOR), the State assumes the risk of adverse changes in the traditional relationship between taxable and tax-exempt rates, including for example, reductions in marginal federal tax rates or elimination of the tax preference for municipal debt. Those changes may increase the interest rates on the underlying variable rate debt but would not impact the variable rate swap receipt based on the LIBOR index.

Termination Risk (GASB 53 ¶73d)

Please describe any termination risk if the derivative's unscheduled end could affect the State's asset/liability strategy or present the State with potentially significant unscheduled termination payments to the counterparty. In the description, please include any termination events that have occurred, dates that the derivative may be terminated, and any out-of-the-ordinary termination events contained in the contractual documents.

The State retains the right to terminate the swap agreement at the market value prior to maturity. The State has termination risk under the contract particularly upon the occurrence of an Additional Termination Event (ATE) as defined in the swap documents. An ATE occurs if either the credit rating of the bonds associated with a specific swap, or the credit rating of the swap counterparty falls below a threshold defined in each swap agreement. If the swap is terminated, the State's variable rate exposure on the bonds would no longer be converted to a synthetic fixed interest rate. Also, if a swap termination were to occur and the swap had a negative fair value, the State may be liable to the counterparty for a payment. Other termination events include failure to pay, bankruptcy, merger without assumption, and illegality. All of the aforementioned termination events are ordinary provisions in current market. No termination events have occurred.

Rollover Risk (GASB 53 ¶73e)

Please describe any rollover risk if the derivative associated with the State's debt does not extend to the maturity of the debt. In the description, please disclose the maturity of the derivative and the maturity of the associated debt.

None. The expiration date of the swap is the same as the maturity date of the bonds.

Market-access Risk (GASB 53 ¶73f)

Please describe any risk the State may have relative to its ability to enter credit markets or that credit will become more costly.

None.

Prepared by: Cassie Sanfrey Phone Number: 614-728-8414 Date: August 12, 2015 E-Mail Address: <u>cassie.sanfrey@obm.state.oh.us</u> Source(s) of Information Used to Complete Schedule: