

# Division of Mitigation Services

## 2016-17 Annual Report

DMS-WIDE

APPENDICES

REGULATORY  
ADDENDUM

NCDOT  
PROGRAM

STATEWIDE  
PROGRAM

RIPARIAN BUFFER  
PROGRAM

NUTRIENT OFFSET  
PROGRAM

MISSION: To provide cost-effective mitigation alternatives that improve the state's water resources.



# Executive Summary

In Fiscal Year (FY) 2016-17, the NC Division of Mitigation Services (DMS):

- Assisted the North Carolina Department of Transportation (NCDOT) obtain permits for 109 transportation projects by providing 130,085 stream mitigation credits and 83.87 wetland mitigation credits.
- Assisted customers with 135 development projects in the Statewide Stream and Wetland, Riparian Buffer, and Nutrient Offset In-Lieu Fee (ILF) Programs by providing:
  - 8,766 stream credits,
  - 35.79 wetland credits,
  - 44.70 acres of buffer mitigation,
  - 9,127 pounds of nitrogen reduction, and
  - 729 pounds of phosphorus reduction.
- Received 98% of its nutrient payments from private developers for schools, recreational, medical, and other commercial and residential projects.



# Program-Wide

The FY 2016-17 DMS Annual Report fulfills statutory and regulatory reporting requirements as detailed in the 2010 NCDEQ/DMS In-Lieu Fee Instrument governing In-Lieu Fee Programs for Stream & Wetland Mitigation and the Federal Rules in 33 CFR Parts 325 and 332 & 40 CFR Part 230, and North Carolina G.S. §143-214.13.

DMS operates four in-lieu fee programs:

- **NC DOT Statewide Stream and Wetland ILF**
- **Statewide Stream and Wetland ILF**
- **Riparian Buffer ILF**, and
- **Nutrient Offset ILF Program**





# Property



- During FY 2016-17, the State Property Office closed 19 conservation easement transactions totaling 89.59 acres associated with DMS' projects.
- All properties that closed during FY 2016-17 are shown in Appendix A-1.
- A full inventory of all properties acquired to date is presented in Appendix A-2.
- More than 76,949 acres of fee simple property or conservation easements have been acquired by DMS and partners to date.
- A full list of DMS projects is in Appendices A-3, A-4, A-5, and A-6.



# Program Costs

Average mitigation credit costs for the last fiscal year have been determined by analyzing Full Delivery contracts and Mitigation Bank purchases awarded over the last 3 fiscal years. The dataset includes actual contracts awarded and estimates of costs required to complete projects.

CREDIT TYPE	RANGE OF PROGRAM COSTS PER CREDIT	CURRENT FEES
Stream	\$276 to \$417	\$300 (Standard); \$394 (High)
Riparian Wetland	\$5,350 to \$74,900	\$40,580 (Standard); \$71,772 (High)
Non-Riparian Wetland	\$25,680 to \$41,195	\$26,631 (Standard); \$51,782 (High)
Coastal Marsh Wetland	N/A*	\$176,551
Riparian Buffer	\$0.92 to \$1.07	\$1.16
Nutrient Offset Nitrogen	\$78.03 to \$120.36	\$8.50 to \$127.26**
Nutrient Offset Phosphorus	N/A*	\$200.00 to \$389.87**

\*DMS did not implement any Coastal Marsh wetland or Phosphorus nutrient offset projects in the last three fiscal years.

\*\*Nutrient Offset fees are set using the Actual Cost Method and vary by region, see [Nutrient Offset Mitigation Fees](#)



# Cost Analysis of Private Mitigation Banks

Reporting requirements of G.S. §143 214.13 require DMS to compare project costs with private mitigation bank rates. For this analysis, DMS used the actual submitted prices for Mitigation Bank Credits from its request for Bids in the last fiscal year. A complete list of purchased bank credits during 2016-2017 are listed in [Appendix B](#).

MITIGATION TYPE	RANGE OF BANK PRICES PER CREDIT
Stream Mitigation Units	\$352 to \$418
Riparian Wetland Mitigation Units	\$38,000 to \$75,000
Non-Riparian Wetland Mitigation Units	\$19,500 to \$60,000
Coastal Marsh Mitigation Units	None Submitted
Riparian Buffer Mitigation Units	\$0.90 to \$1.15
Nitrogen Offset Credits	\$9.00 to \$130.00
Phosphorus Offset Credits	\$200.00 to \$385.00



# Advance Credits



The In-Lieu Fee mitigation instrument allocated advance credits by river basin and eight-digit cataloging units for use by DMS. Pursuant to this operating agreement, this annual report includes a summary of the status and use of “Advance Credits” as defined by Federal rules in Appendix C.



# Wetland Losses and Gains

Reporting requirements of G.S. §143-214.13 require DMS to document statewide wetland losses and gains and compensatory mitigation performed under G.S. §143-214.8 through G.S. §143-214.12. The data below have been provided by the Division of Water Resources (DWR) and reflect permitting by the Department of Environmental Quality (DEQ). This annual report documents compensatory mitigation performed by DMS. Complete lists of mitigation requirements and assets are provided in the [Regulatory Addendum](#).

DWR Quarterly Reports for 7/1/2016 through 6/30/2017					
Streams (Linear Feet)	Q1	Q2	Q3	Q4	YTD
Lost from permitting	35,846.42	16,640.00	11,227.51	19,067.70	82,781.63
Gained from permitting (mitigation)	18,250.00	11,992.00	1,026.00	7,812.00	39,080.00
Wetlands (Acres)	Q1	Q2	Q3	Q4	YTD
Lost from permitting	44.35	7.88	12.43	55.44	120.10
Gained from permitting (mitigation)	55.96	5.40	4.13	39.68	105.17
Riparian Buffers (Acres)	Q1	Q2	Q3	Q4	YTD
Lost from permitting	23.25	15.80	11.85	11.64	62.54
Gained from permitting (mitigation)	1.25	12.32	2.35	8.83	24.75





# Program Costs

NCDOT  
Stream &  
Wetland

Statewide  
Stream &  
Wetland

Riparian  
Buffer

Nutrient  
Offset

Each of the four DMS In-Lieu Fee Programs are financially independent funds that operate solely on receipts and do not receive any appropriations from the General Assembly. A fund status report for each program is provided.





# Financial Glossary

Financial Term	Definition
<b>Beginning Cash Balance</b>	Amount of cash in fund account at beginning of fiscal year (abbrev. FY)
<b>Revenues</b>	Amount of money collected during FY
<b>Expenditures</b>	Amount of money spent during FY
<b>Ending Cash Balance</b>	Amount of money in fund account at end of FY
<b>Cost to Complete Program Requirements</b>	Estimate of the amount of money needed to execute all of the remaining contracts and projects required to satisfy the program's mitigation obligations
<b>Projected Encumbrance Adjustment</b>	Estimate of end of year adjustments to Cost to Complete Estimate to account for recent changes in project assets, requirements, and future expected contracts.
<b>Net Accounts Receivable</b>	Outstanding receipts that will be collected over time
<b>Net Asset Inventory Value</b>	Current estimated value of unused credits available for sale at current fee schedule
<b>Grand Total Program</b>	Summary of all financial assets and liabilities





# NCDOT Stream & Wetland ILF

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# NCDOT Stream & Wetland ILF Requirements

- ❖ The goal of this program is to produce mitigation credits to offset anticipated impacts from the implementation of the NCDOT seven-year Transportation Improvement Program (TIP). Anticipated impacts are provided to DMS by the Natural Environment Unit at NCDOT.
- ❖ In fiscal 2016-17 DMS provided mitigation for 109 NCDOT transportation permitted projects requiring stream and/or wetland mitigation.
- ❖ For these NCDOT projects, DMS is providing 130,085 stream mitigation credits and 83.79 wetland mitigation credits.
- ❖ Appendix D-1 provides NCDOT Stream and Wetland Program permitted requirements for fiscal 2016-17.





# NCDOT Stream & Wetland ILF Fund Status

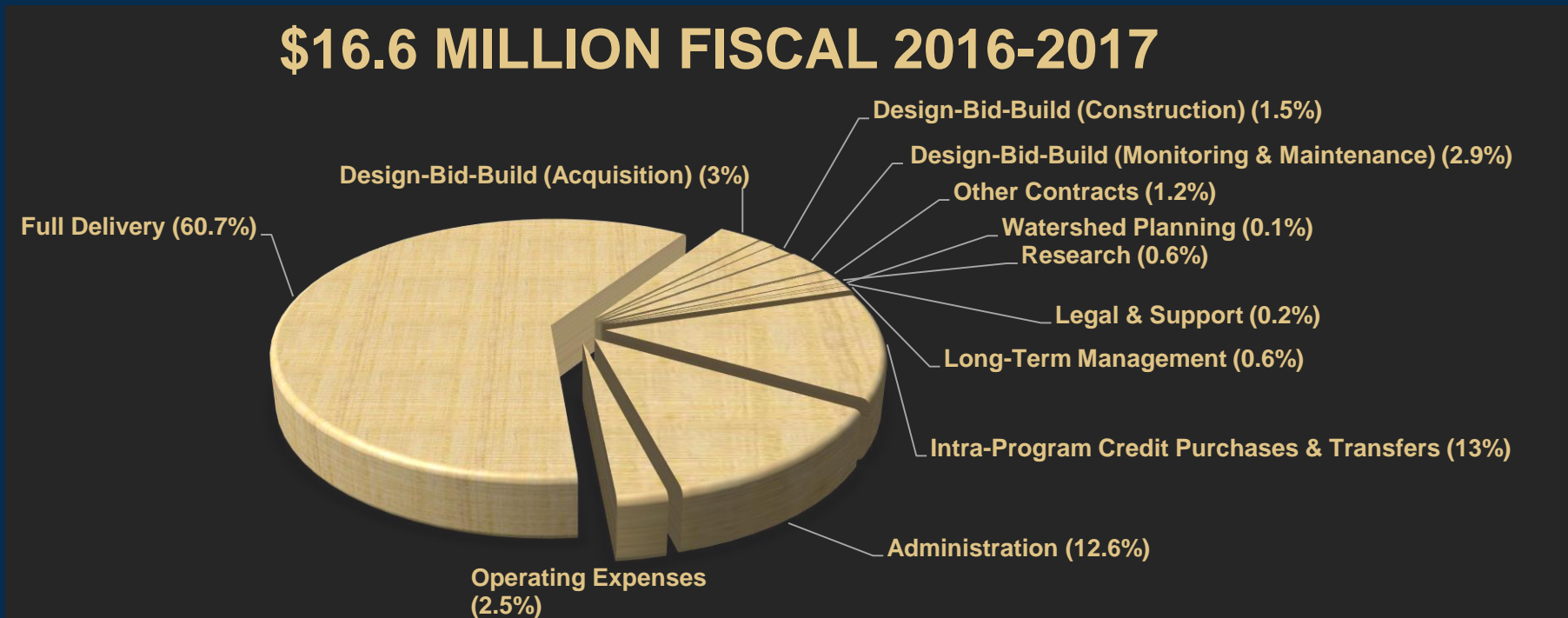
Beginning Cash Balance		\$10,406,463.48
	Revenue	\$13,928,811.98
	Expenditures	(\$16,596,775.90)
Ending Cash Balance		\$7,738,499.56
	Cost to Complete Program Requirements	(\$75,750,848.52)*
	Projected Encumbrance Adjustment	(\$3,885,840)*
	Net Accounts Receivable	\$79,637,760.32*
Total Projected Cash Reserve		\$0.00

\*Note NCDOT has ordered an additional \$48.6 million of mitigation for future transportation projects that are not captured in the above table.



# NCDOT Stream & Wetland ILF Expenditures

This figure summarizes the expenditures by payment type for the NCDOT Stream and Wetland Program. [Appendix E](#) provides a full listing of the expenditures by fund.



# NCDOT Stream & Wetland ILF Compliance

The NCDOT Stream and Wetland Program is a national leader in producing compensatory mitigation in advance of unavoidable environmental impacts. Since 2003, the agreements between NCDOT, NCDEQ, and the U.S. Army Corps of Engineers have allowed NCDOT to move forward with more than \$17 billion in road development projects without delays associated with compensatory mitigation. Regulatory Addendum IV provides a detailed compliance action strategy by Cataloging Unit.

DOT Program Type	Requirements Due (credits)	Requirements Met (credits)	Requirements Not Met (credits)	Compliance (credits)	Total Advanced Mitigation * (unassigned)
Stream	765,906.70	765,906.70	0	100%	711,672.12
Wetlands	1,443.10	1,442.33	0.77	99.95%	9,294.42

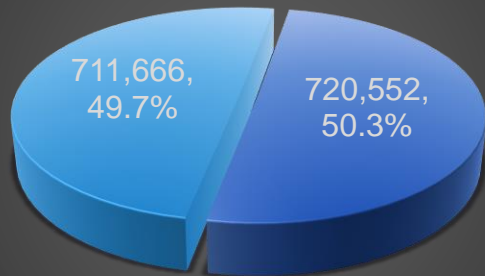
*\*Includes surplus credits developed by NCDOT and managed by DMS*



# NCDOT Stream & Wetland ILF Inventory

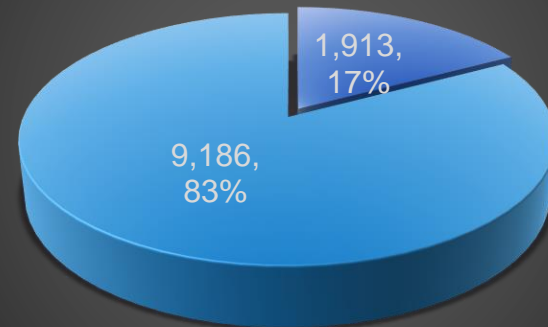
The NCDOT Stream and Wetland ILF Program's gross inventory\* totaled 1,370,462 stream credits and 10,630.28 wetland credits. The vast majority of these credits are unassigned and available for future permit requirements as projected in the state's Transportation Improvement Program. Detailed information about the NCDOT Stream and Wetland ILF Program Gross and Net inventories can be found in Appendices F-1 and F-2 (for non HQP), and F-3 and F-4 (for HQP).

## Stream Inventory fiscal 2016-17



■ Applied Credits (50.3%)  
■ Unassigned Credits (49.7%)

## Wetland Inventory fiscal 2016-17



■ Applied Credits (17%) ■ Unassigned Credits (83%)

*\*Includes surplus credits developed by NCDOT and managed by DMS*





# Statewide Stream & Wetland ILF

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# Statewide Stream & Wetland ILF Requirements

- ❖ In fiscal 2016-17, DMS received 59 customer payments into the Statewide Stream and Wetland Program, totaling \$5,571,550.75.
- ❖ These 59 customer payments represent 8,786 stream credits and 35.79 wetland credits.
- ❖ Appendix D-2 provides Statewide Stream and Wetland Program fiscal 2016-17 receipts and requirements.



# Statewide Stream & Wetland ILF Fund Status

Beginning Cash Balance	\$26,520,104.98
Revenue	\$7,922,599.88
Expenditures	(\$5,711,614.78)
Ending Cash Balance	\$28,731,090.08
Cost to Complete Program Requirements	(\$35,625,610.39)
Projected Encumbrance Adjustment	(\$6,523,501.23)
Net Accounts Receivable	\$5,082,874.17
Total Projected Cash Reserve	(\$8,335,147.37)
Net Asset Inventory Value	\$37,312,919.64
Grand Total Program	\$28,977,772.27

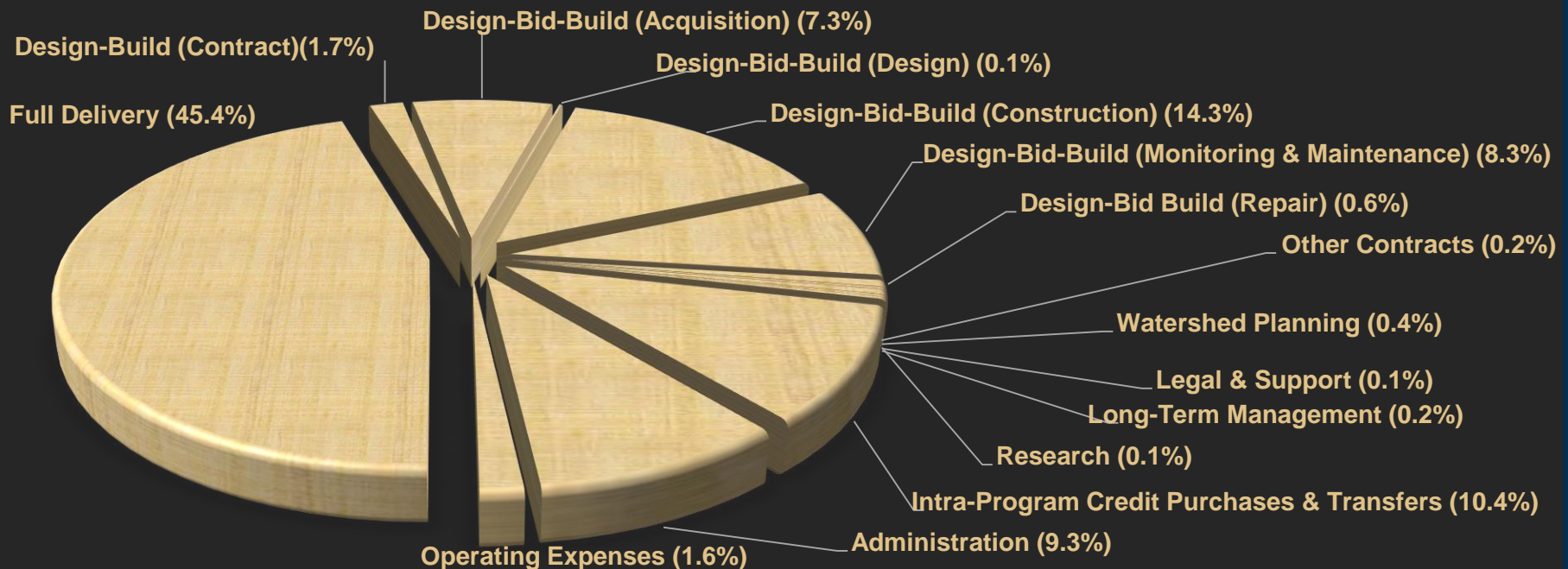




# Statewide Stream & Wetland ILF Expenditures

This figure summarizes the expenditures by payment type for the Statewide Stream and Wetland Program. [Appendix E](#) provides a full listing of the expenditures by fund.

## \$5.7 MILLION TOTAL FISCAL 2016-2017





# Statewide Stream & Wetland ILF Compliance

For fiscal 2016-17, the Statewide Stream and Wetland Program had satisfied 99.65 percent of all stream requirements and 97.93 percent of all wetland requirements. The Statewide Stream and Wetland Program also measures compliance by percentage of permits satisfied. DMS continues to implement projects to address all of its permit requirements. Regulatory Addendum IV provides a detailed compliance action strategy by Cataloging Unit.

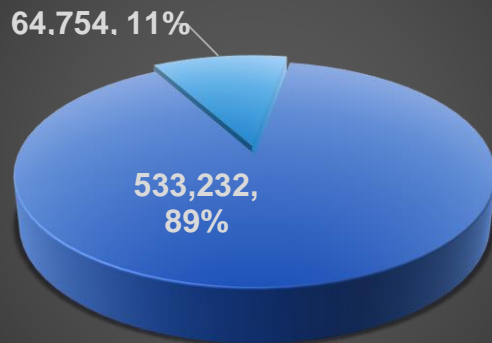
Statewide Program Type	Requirements Due (credits)	Requirements Met (credits)	Requirements Not Met (credits)	Compliance (credits)	Total Advanced Mitigation (unassigned)
Stream	579,494.70	577,461	2,033.70	99.65%	64,753.64
Wetlands	1,118.57	1,095.38	23.19	97.93%	195.03



# Statewide Stream & Wetland ILF Program Inventory

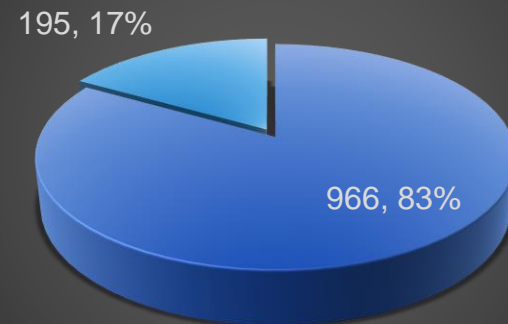
The Statewide Stream and Wetland Program's gross inventory totaled 597,985 stream credits and 1,161 wetland credits. Detailed information about the Statewide Stream and Wetland Program Gross and Net Inventories can be found in Appendices [F-5](#) and [F-6](#).

## Stream Inventory fiscal 2016-17



■ Applied Credits (89%) ■ Unassigned Credits (11%)

## Wetland Inventory fiscal 2016-17



■ Applied Credits (83%) ■ Unassigned Credits (17%)





# Riparian Buffer Mitigation ILF

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# Riparian Buffer Mitigation ILF Requirements

- ❖ In fiscal 2016-17, DMS received 26 customer payments into the Riparian Buffer Mitigation Program, totaling \$2,163,714.21.
- ❖ These 26 customer payments represent 1,946,986 square feet (44.7 acres) of buffer mitigation.
- ❖ Approximately 84.53% of the fiscal 2016-17 requirements came from nine NCDOT projects.
- ❖ Appendix D-3 provides Riparian Buffer Program fiscal 2016-17 receipts and requirements.





# Riparian Buffer ILF Fund Status

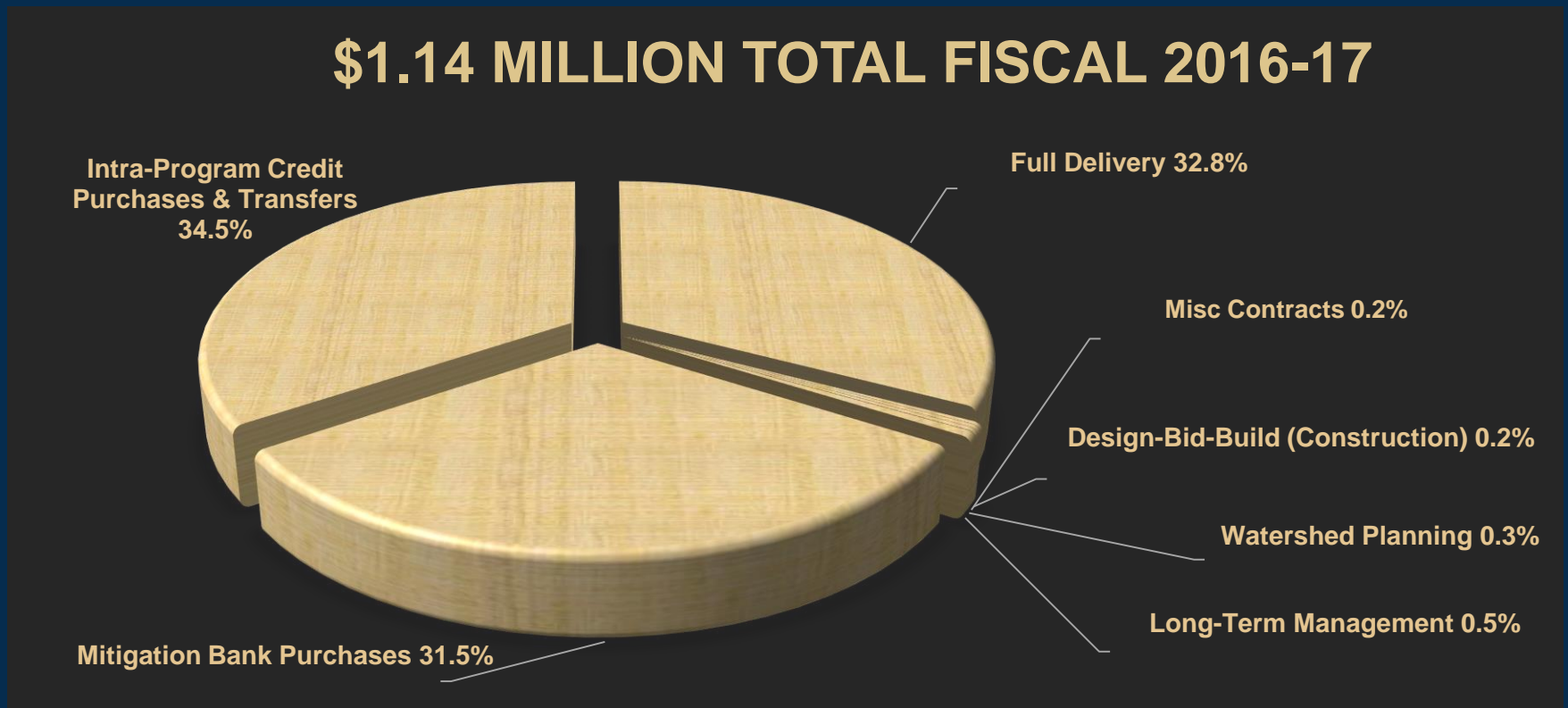
Beginning Cash Balance	\$9,250,160.98
Revenue	\$3,121,675.88
Expenditures	(\$1,139,207.89)
Ending Cash Balance	\$11,232,628.97
Cost to Complete Program Requirements	(\$9,747,159.52)
Projected Encumbrance Adjustment	\$365,665.87
Net Accounts Receivable	(\$28,993.39)
Total Projected Cash Reserve	\$1,822,141.93
Net Asset Inventory Value	\$1,231,916.78
Grand Total Program	\$3,054,058.71

This table summarizes the finances of all five riparian buffer river basin funds.



# Riparian Buffer ILF Expenditures

This figure summarizes the expenditures by payment type for the Riparian Buffer Mitigation Program. [Appendix E](#) provides a full listing of the expenditures by fund.



# Riparian Buffer ILF

## Compliance and Inventory

Detailed information about the Riparian Buffer Program's compliance action strategy can be found in [Regulatory Addendum IV](#) and about the Program's Gross and Net Inventories can be found in Appendices [F-7](#) and [F-8](#).

Buffer Program Type	Requirements Due (credits)	Requirements Met (credits)	Requirements Not Met (credits)	Compliance	Total Advanced Mitigation (unassigned)
Cape Fear	10,081,306	6,285,878	3,795,428	62.35%	7,829
Catawba	145,060	145,060	0	100.00%	3,269
Neuse	21,9997,623	21,887,475	110,150	99.50%	776,775
Tar-Pamlico	2,695,739	2,462,132	233,607	91.33%	152,214
Yadkin	22,575	22,575	0	100.00%	0
Grand Total	34,942,303	30,803,118	4,139,184	88.15%	940,087





# Nutrient Offset ILF

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# Nutrient Offset ILF Requirements

- ❖ In fiscal 2016-17, DMS received 50 customer payments into the Nutrient Offset Program, totaling \$736,244.84
- ❖ These 50 customer payments represent reductions of 9,127.11 pounds of nitrogen and 728.66 pounds of phosphorus.
- ❖ 93% of the fiscal 2016-17 payments came from private developers for schools, recreational, medical, and other commercial and residential projects.
- ❖ Appendix D-4 provides Nutrient Offset Program fiscal 2016-17 receipts and requirements.



# Nutrient Offset ILF Fund Status

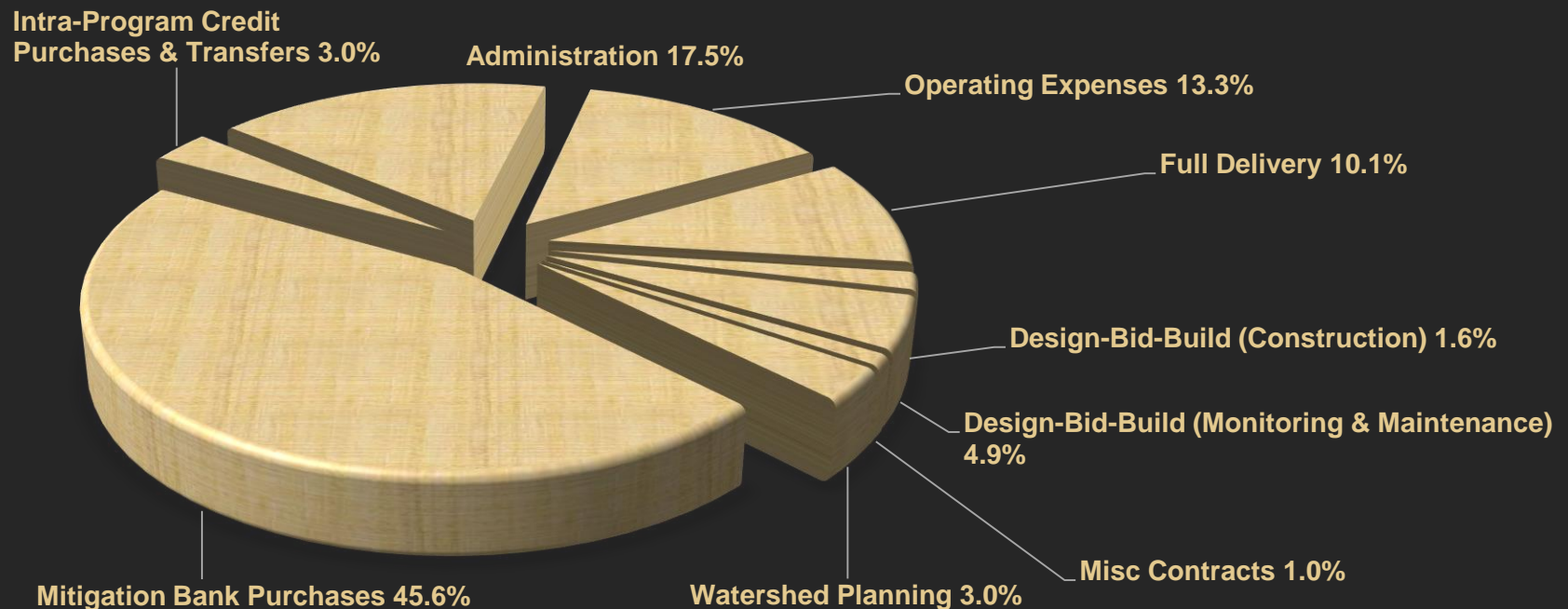
Beginning Cash Balance	\$6,205,209.33
Revenue	\$849,354.74
Expenditures	(\$275,861.48)
Ending Cash Balance	\$6,778,702.59
Cost to Complete Program Requirements	(\$5,822,397.40)
Projected Encumbrance Adjustment	\$3,221,101.21
Net Accounts Receivable	(\$497,381.46)
Total Projected Cash Reserve	\$4,674,787.86
Net Asset Inventory Value	\$4,909,564.68
Grand Total Program	\$9,584,352.54



# Nutrient Offset ILF Expenditures

This figure summarizes the expenditures by payment type for the Nutrient Offset Program. Appendix E provides a full listing of the expenditures by fund.

**\$0.275 MILLION TOTAL FISCAL 2016-17**



# Nutrient Offset ILF

## Compliance and Inventory

DMS accepts payments for nitrogen reduction in the Neuse basin and nitrogen and phosphorus reductions in the Tar-Pamlico basin, the Falls Lake watershed and in the Jordan Lake watershed. Detailed information about the Nutrient Offset Program's Gross and Net Inventories can be found in Appendices [F-9](#) and [F-10](#), and about the Program's compliance action strategies can be found in [Regulatory Addendum IV](#).

Nutrient Offset Program Type	Requirements Due (credits)	Requirements Met (credits)	Requirements Not Met (credits)	Compliance (credits)	Total Advanced Mitigation (unassigned)
Falls Nitrogen	14,818.08	14,818	0	100.00%	517
Falls Phosphorus	1,555.13	988	48.51	85.50%	0
Jordan Nitrogen	34,927.39	21,788	13,139.24	62.38%	0
Jordan Phosphorus	12.23	0	12.23	0.00%	289
Neuse Nitrogen	1,356,171.65	1,356,172	0	100.00%	114,398
Tar Pamlico Nitrogen	100,163.76	100,164	0	100.00%	83,591
Tar Pamlico Phosphorus	6,551.87	6,552	0	100.00%	5,347
<b>Grand Total</b>	<b>1,513,800.11</b>	<b>1,500,481</b>	<b>13,199.98</b>	<b>99.12%</b>	<b>204,143</b>





# Appendices

<b>Appendix A - Property</b>	<a href="#"><u>A-1. Closed Fiscal Year</u></a>	<b>Appendix F - Inventory</b>	<a href="#"><u>F-1. NCDOT Gross Assets (no HQP)</u></a>
	<a href="#"><u>A-2. Cumulative Properties</u></a>		<a href="#"><u>F-2. NCDOT Net Assets (no HQP)</u></a>
	<a href="#"><u>A-3. Non-HQP Site List</u></a>		<a href="#"><u>F-3. NCDOT Gross Assets (HQP)</u></a>
	<a href="#"><u>A-4. HQP Site List</u></a>		<a href="#"><u>F-4. NCDOT Net Assets (HQP)</u></a>
<b>Appendix B - Mitigation Bank Costs</b>	<a href="#"><u>A-5. Riparian Buffer ILF Projects</u></a>		<a href="#"><u>F-5. Statewide Gross Assets</u></a>
	<a href="#"><u>A-6. Nutrient Offset ILF Projects</u></a>		<a href="#"><u>F-6. Statewide Net Assets</u></a>
<b>Appendix C - Advance Credits</b>	<a href="#"><u>C. Advance Credit Summary</u></a>	<b>Regulatory Addendum</b>	<a href="#"><u>F-7. Riparian Buffer Gross Assets</u></a>
	<a href="#"><u>D-1. NCDOT FY Requirements</u></a>		<a href="#"><u>F-8. Riparian Buffer Net Assets</u></a>
<b>Appendix D - FY Requirements</b>	<a href="#"><u>D-2. Statewide FY Requirements</u></a>		<a href="#"><u>F-9. Nutrient Offset Program Gross Assets</u></a>
	<a href="#"><u>D-3. Riparian Buffer FY Requirements</u></a>		<a href="#"><u>F-10. Nutrient Offset Program Net Assets</u></a>
<b>Appendix E - Expenditures</b>	<a href="#"><u>D-4. Nutrient Offset Requirements</u></a>		



click on each to download, or here for [Full Appendices](#)



# Regulatory Addendum



click on each to download, or here for [Full Addendum](#)