

# Division of Mitigation Services 2018-19 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) 2018-19, the NC Division of Mitigation Services (DMS):

- Assisted the North Carolina Department of Transportation (NCDOT) obtain permits for 73 transportation projects by providing 51,586.5 stream mitigation credits and 294.998 wetland mitigation credits.
  
- Assisted customers with 109 development projects in the Statewide Stream and Wetland, Riparian Buffer, and Nutrient Offset In-Lieu Fee (ILF) Programs by providing:
  - 15,284 stream credits,
  - 44.209 wetland credits,
  - 45.125 acres of buffer mitigation,
  - 19,419.14 pounds of nitrogen reduction, and
  - 1,235.68 pounds of phosphorus reduction.
  - Received 85% of the stream, wetland, buffer and nutrient payments from private developers for schools, medical and commercial and residential projects.



# Program-Wide

The FY 2018-19 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 2018-19 the State Property Office closed 47 conservation easement transactions totaling 451 acres associated with DMS' projects.
- All properties that closed during FY 2018-19 are shown in [Appendix A-1](#).
- A full inventory of all properties acquired to date is presented in [Appendix A-2](#).
- More than 78,766 acres of conservation land 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

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	\$275 to \$490	\$525.65
Freshwater Wetland	\$29,500 to \$71,000	\$52,273.99 to \$133,052.45
Coastal Marsh Wetland	N/A*	\$560,000.00
Riparian Buffer	\$0.77 to \$3.28	\$0.94 to \$3.81
Nutrient Offset Nitrogen	\$76.50 to \$118.00	\$8.47 to \$136.25
Nutrient Offset Phosphorus	N/A*	\$120.03 to \$280.95

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

\*\*Mitigation fees are set using the Actual Cost Method and may result in premium costs by region.



# 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 Requests for Bids in the last fiscal year. A complete list of purchased bank credits during 2018-2019 are listed in [Appendix B](#).

MITIGATION TYPE	RANGE OF BANK PRICES PER CREDIT
Stream Mitigation Credits	\$449 to \$645
Riparian Wetland Mitigation Credits	\$54,000 to \$90,000
Non-Riparian Wetland Mitigation Credits	\$45,000 to \$64,500
Coastal Marsh Mitigation Credits	None Submitted
Riparian Buffer Mitigation Credits	\$0.90 to \$3.49
Nitrogen Offset Credits	\$12.00 to \$130.00
Phosphorus Offset Credits	\$15.00 to \$344.00



# 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](#).

<b>DWR Quarterly Reports for 7/1/2018 through 6/30/2019</b>					
<b>Streams (Linear Feet)</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>YTD</b>
Lost from permitting	20,342.50	14,560.00	22,860.00	19,991.74	77,754.24
Gained from permitting (mitigation)	3,447.00	479.00	38,303.00	4,607.00	46,836.00
<b>Wetlands (Acres)</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>YTD</b>
Lost from permitting	25.86	10.02	12.29	31.55	79.72
Gained from permitting (mitigation)	14.87	0.00	8.41	17.87	41.15
<b>Riparian Buffers (Acres)</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>YTD</b>
Lost from permitting	28.00	7.07	10.01	18.18	63.26
Gained from permitting (mitigation)	26.83	0.10	5.30	7.46	39.69

\*Due to permit versions and revisions, "issued dates" for mitigation and impacts may not occur in the same quarter. Buffer impacts may also include impacts from non-buffer basins if applicants included that value in their Pre-Construction Notification. Areas of impact may include stream stabilization, ephemeral or intermittent channels, impacts to multiple small channels, isolated wetlands, etc. that do not require mitigation. Due to versions and revisions, different versions of the same project may occur in the same quarter causing a double calculation of impacts. As of May 4, 2017 the stream mitigation threshold requirements changed so that only impacts 300 lf or greater of perennial stream require mitigation.



# 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.



# DMS Program Fiscal Summary

Detailed information showing the FY 18-19 fund status for each of the DMS In-Lieu-Fee Programs.

	<b>NCDOT In-Lieu Fee Program</b>	<b>Statewide Stream &amp; Wetland In-Lieu-Fee Program</b>	<b>Riparian Buffer In-Lieu-Fee Program</b>	<b>Nutrient Offset In-Lieu Fee Program</b>
<b>Beginning Cash Balance</b>	<b>\$4,922,686.25</b>	<b>\$16,364,925.63</b>	<b>\$16,154,342.78</b>	<b>\$2,398,314.65</b>
Revenues	\$23,482,139.39	\$11,211,357.72	\$4,063,904.61	\$3,334,725.73
Interest Earned	\$156,830.85	\$456,207.81	\$243,754.33	\$103,595.31
Expenditures	(\$27,964,327.12)	(\$8,443,266.10)	(\$3,551,899.52)	(\$154,929.69)
Bond Index Fund Input	N/A	\$19,000,000.00	N/A	\$2,950,000.00
<b>Ending Cash Balance</b>	<b>\$597,329.37</b>	<b>\$38,589,225.06</b>	<b>\$16,910,102.20</b>	<b>\$8,631,706.00</b>



# NCDOT Stream & Wetland ILF

REQUIREMENTS

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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 2018-19 DMS provided mitigation for 73 NCDOT transportation permitted projects requiring stream and/or wetland mitigation.
- ❖ For these NCDOT projects, DMS is providing 51,586.5 stream mitigation credits and 294.998 wetland mitigation credits.
- ❖ Appendix D-1 provides NCDOT Stream and Wetland Program permitted requirements for fiscal 2018-19.



# NCDOT Stream & Wetland ILF Fund Status

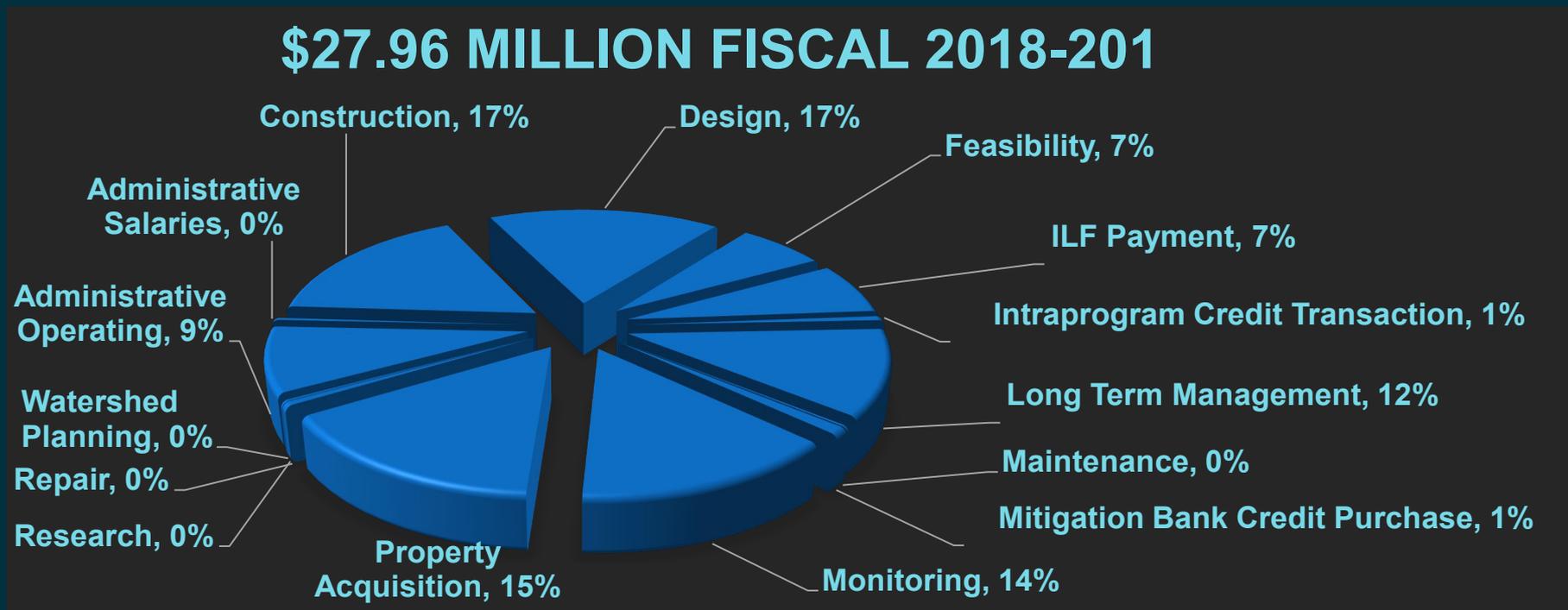
(2984, 2984-9310,2930-9303,)

<b>Beginning Cash Balance</b>	<b>\$4,922,686.25</b>
Revenues	\$23,482,139.39
Interest Earned	\$156,830.85
Expenditures	(\$27,964,327.12)
Bond Index Fund Input	N/A
<b>Ending Cash Balance</b>	<b>\$597,329.37</b>



# 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 \$20 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	895,577.70	885,897.9	9,679.80	98.92%	739,881.50
Wetlands	1,815.44	1,814.65	0.80	99.96%	8,826.35

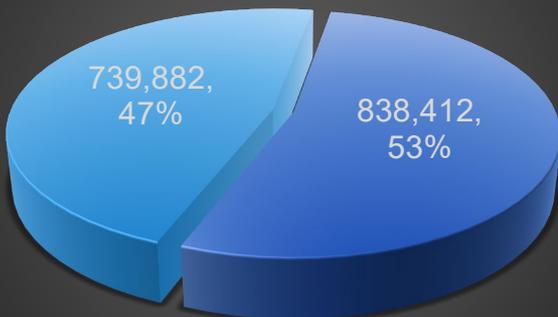
*\*Includes surplus credits developed by NCDOT and managed by DMS*



# NCDOT Stream & Wetland ILF Inventory

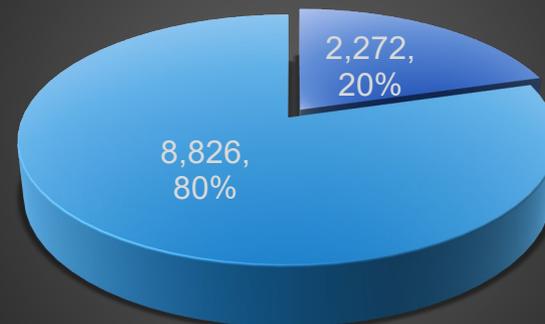
The NCDOT Stream and Wetland ILF Program's gross inventory\* totaled 1,578,239.71 stream credits and 11,105.37 wetland credits. The majority of these credits are unassigned and available for future permit requirements as projected in the state's Transportation Improvement Program. Detailed information 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 2018-19



■ Applied Credits (53%) ■ Unassigned Credits (47%)

## Wetland Inventory fiscal 2018-19



■ Applied Credits (20%) ■ Unassigned Credits (80%)

*\*Includes surplus credits developed by NCDOT and managed by DMS.  
Unassigned credits are generated for future development.*



# Statewide Stream & Wetland ILF

REQUIREMENTS

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# Statewide Stream & Wetland ILF Requirements

- ❖ In fiscal 2018-19, DMS received 109 customer payments into the Statewide Stream and Wetland Program, totaling \$9,963,362.30.
- ❖ These 109 customer payments represent 15,284 stream credits and 44.209 wetland credits.
- ❖ Appendix D-2 provides Statewide Stream and Wetland Program fiscal 2018-19 receipts and requirements.



# Statewide Stream & Wetland ILF Fund Status

(2981, 2937)

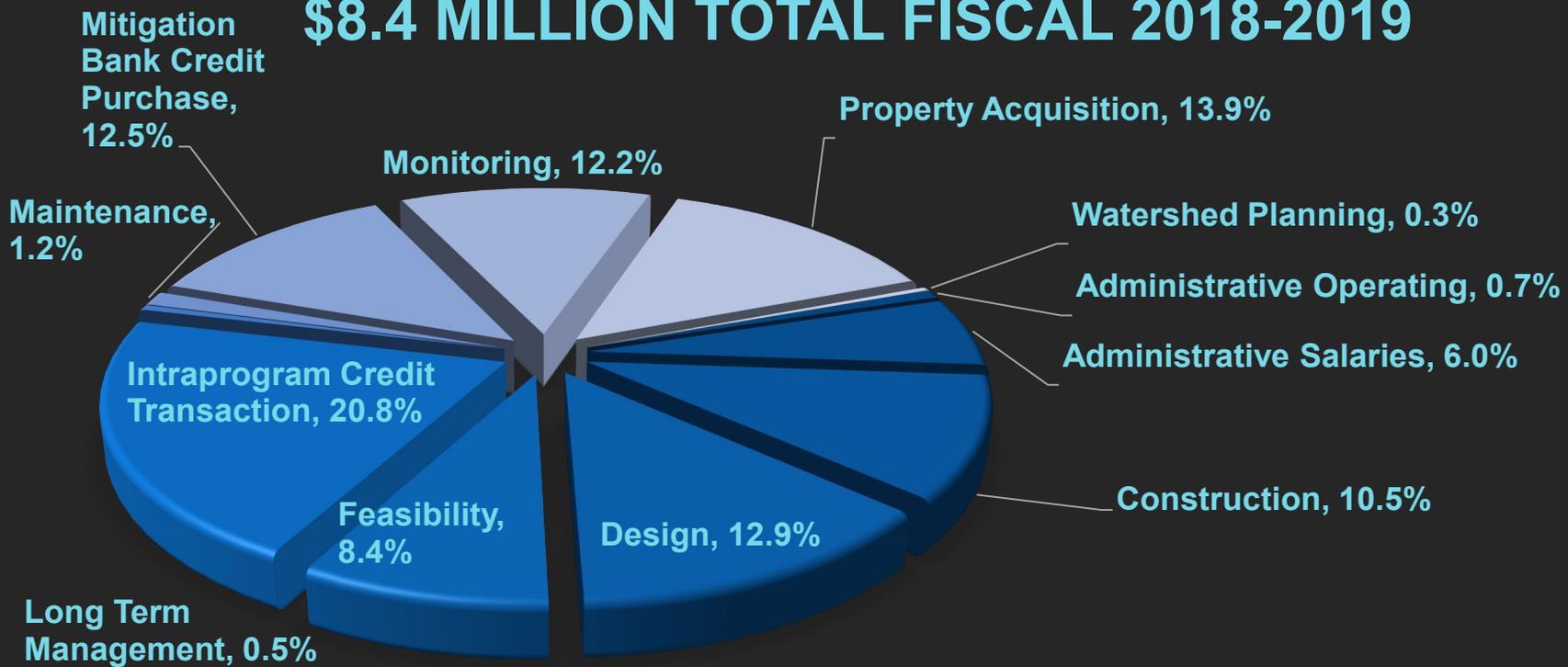
<b>Beginning Cash Balance</b>	<b>\$16,364,925.63</b>
Revenues	\$11,211,357.72
Interest Earned	\$456,207.81
Expenditures	(\$8,443,266.10)
Bond Index Fund	\$19,000,000.00
<b>Ending Cash Balance</b>	<b>\$38,589,225.06</b>



# 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.

**\$8.4 MILLION TOTAL FISCAL 2018-2019**



# Statewide Stream & Wetland ILF Compliance

For fiscal 2018-19, the Statewide Stream and Wetland Program had satisfied 99.90 percent of all stream requirements and 99.13 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.

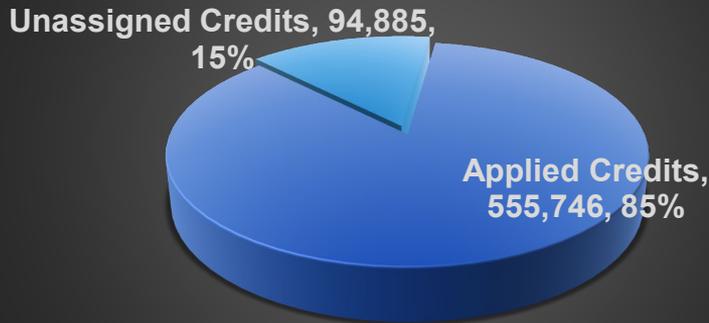
Statewide Program Type	Requirements Due (credits)	Requirements Met (credits)	Requirements Not Met (credits)	Compliance (credits)	Total Advanced Mitigation (Unassigned)
Stream	603,983.92	603,390.92	593.00	99.90%	91,680.19
Wetlands	1,334.88	1,323.33	11.55	99.13%	294.32



# Statewide Stream & Wetland ILF Program Inventory

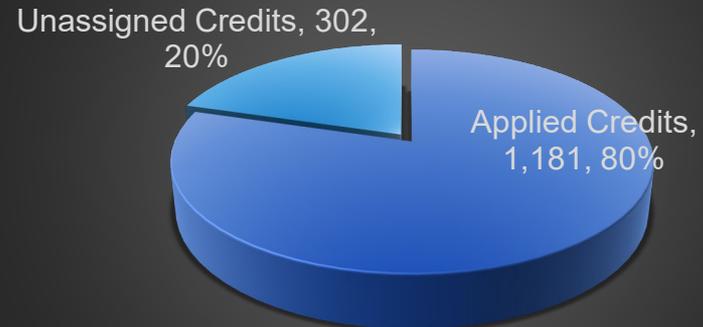
The Statewide Stream and Wetland Program's gross inventory totaled 650,631.03 stream credits and 1,483.3 wetland credits. Detailed information about the Statewide Stream and Wetland Program Gross and Net Inventories can be found in Appendices [F-5](#) and [F-6](#).

## Stream Inventory Fiscal 2018-19



■ Applied Credits   ■ Unassigned Credits

## Wetland Inventory Fiscal 2018-19



■ Applied Credits   ■ Unassigned Credits

*Unassigned credits are generated for future development.*



# Riparian Buffer Mitigation ILF

REQUIREMENTS

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INVENTORY



# Riparian Buffer Mitigation ILF Requirements

- ❖ In fiscal 2018-19, DMS received 32 customer payments into the Riparian Buffer Mitigation Program, totaling \$2,885,344.07.
- ❖ These 32 customer payments represent 1,965,660.330 square feet (45.125 acres) of buffer mitigation.
- ❖ Approximately 51% of the fiscal 2018-19 requirements came from fifteen NCDOT projects.
- ❖ Appendix D-3 provides Riparian Buffer Program fiscal 2018-19 receipts and requirements.



# Riparian Buffer ILF Fund Status

(29CA, 29CF, 29NE, 29TP, 29YA)

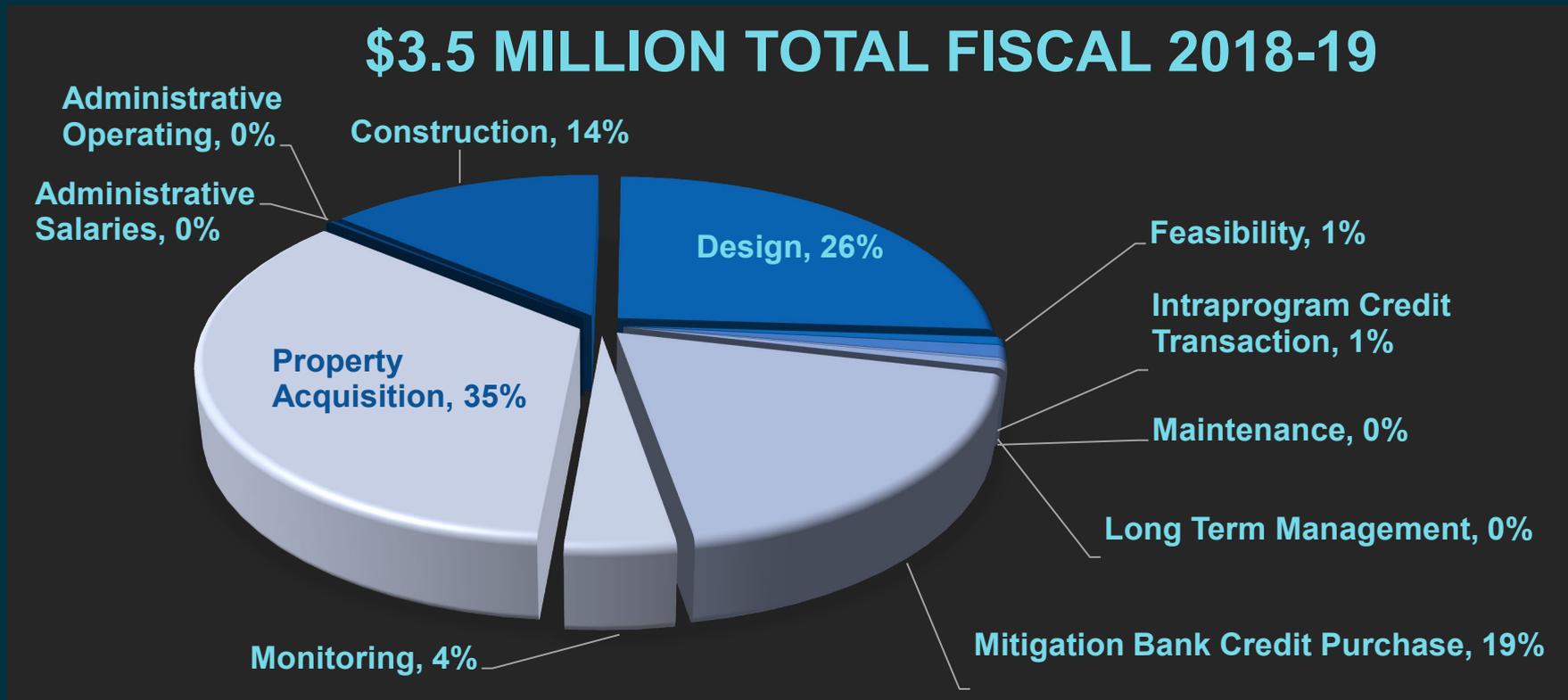
<b>Beginning Cash Balance</b>	<b>\$16,154,342.78</b>
Revenues	\$4,063,904.61
Interest Earned	\$243,754.33
Expenditures	(\$3,551,899.52)
Bond Index Fund	N/A
<b>Ending Cash Balance</b>	<b>\$16,910,102.20</b>

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	11,556,044.60	11,055,266.37	500,778.23	95.67%	113,629.69
Catawba	208,655.00	208,655.00	0	100.00%	3,047.00
Neuse	24,828,380.83	24,681,639.03	146,741.80	99.41%	864,260.76
Tar-Pamlico	4,010,700.58	3,309,874.35	700,826.23	82.53%	1,202,674.52
Yadkin	120,195.00	54,135.33	66,059.67	45.04%	0
Grand Total	40,723,976.01	39,309,570.08	1,414,405.93	96.53%	2,183,611.97

*\*Unassigned credits are generated for future development.*



# Nutrient Offset ILF

REQUIREMENTS

FUND STATUS

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INVENTORY



# Nutrient Offset ILF Requirements

- ❖ In fiscal 2018-19, DMS received 68 customer payments into the Nutrient Offset Program, totaling \$2,239,866.13.
- ❖ These 68 customer payments represent reductions of 19,419.14 pounds of nitrogen and 1,235.68 pounds of phosphorus.
- ❖ 85% of the fiscal 2018-19 payments came from private developers for schools, recreational, medical, and other commercial and residential projects.
- ❖ Appendix D-4 provides Nutrient Offset Program fiscal 2018-19 receipts and requirements.



# Nutrient Offset ILF Fund Status

(2982-9829)

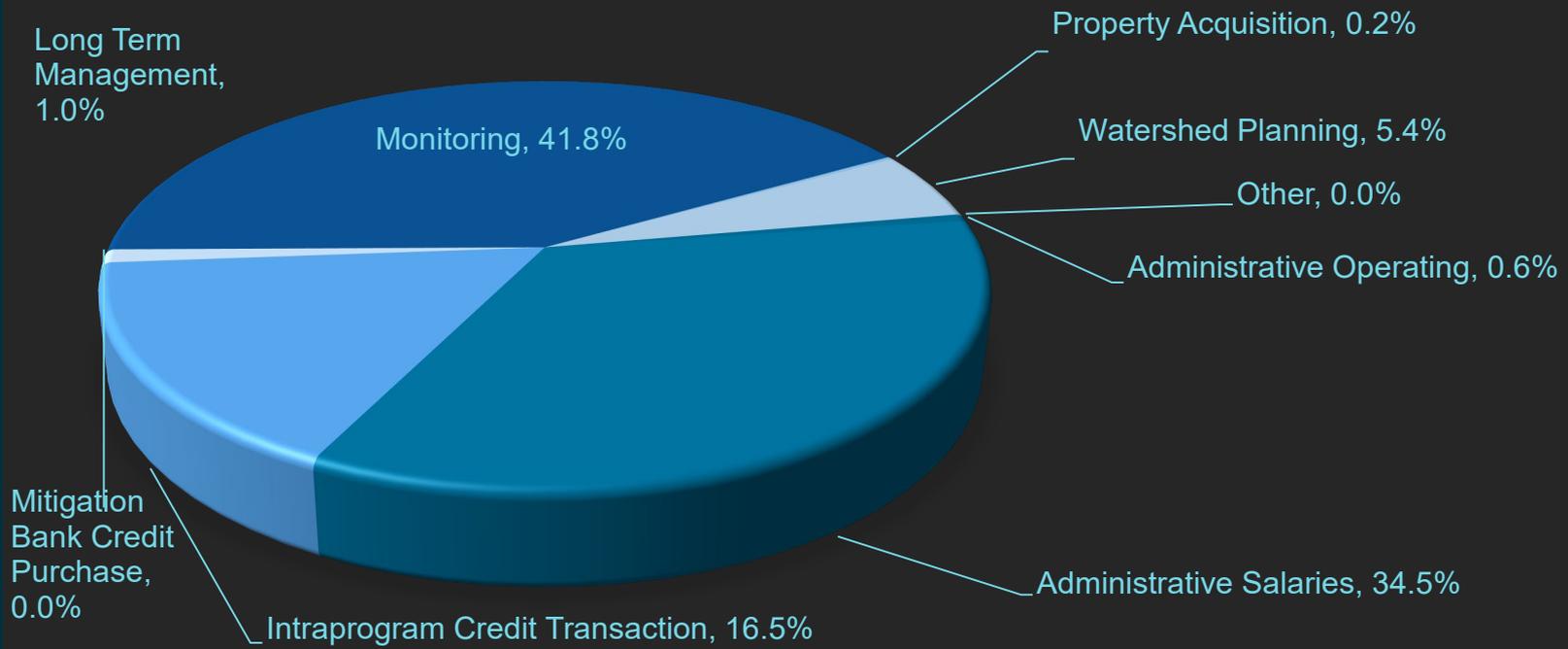
<b>Beginning Cash Balance</b>	<b>\$2,398,314.65</b>
Revenues	\$3,334,725.73
Interest Earned	\$103,595.31
Expenditures	(\$154,929.69)
Bond Index Fund	\$2,950,000.00
<b>Ending Cash Balance</b>	<b>\$8,631,706.00</b>



# 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.

**\$0.15 MILLION TOTAL FISCAL 2018-19**



# 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	15,138.24	15,138.24	0	100.00%	14,539.19
Falls Phosphorus	1,962.51	1,717.09	128.88	87.49%	0.00
Jordan Nitrogen	41,138.11	40,986.89	151.22	99.63%	0
Jordan Phosphorus	18.18	5.95	12.23	32.73%	283.49
Neuse Nitrogen	1,360,644.42	1,360,644.42	0	100.00%	108,605.09
Tar Pamlico Nitrogen	101,206.74	101,206.74	0	100.00%	82,443.45
Tar Pamlico Phosphorus	6,880.61	6,880.61	0	100.00%	5,011.82
<b>Grand Total</b>	<b>1,526,988.81</b>	<b>1,526,579.94</b>	<b>292.33</b>	<b>99.97%</b>	<b>210,883.05</b>

*\*Unassigned credits are generated for future development.*



# Appendices

## Appendix A - Property

[A-1. Closed Fiscal  
Year](#)

[A-2. Cumulative  
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[A-3. Non-HQP Site  
List](#)

[A-4. HQP Site List](#)

[A-5. Riparian Buffer  
ILF Projects](#)

[A-6. Nutrient Offset  
ILF Projects](#)

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[C. Advance Credit  
Summary](#)

## Appendix C - Advance Credits

[D-1. NCDOT FY  
Requirements](#)

[D-2. Statewide FY  
Requirements](#)

[D-3. Riparian Buffer  
FY Requirements](#)

[D-4. Nutrient Offset  
Requirements](#)

## Appendix D - FY Requirements

## Appendix E - Expenditures

## Appendix F - Inventory

## Regulatory Addendum

[F-1. NCDOT Gross  
Assets \(no HQP\)](#)

[F-2. NCDOT Net  
Assets \(no HQP\)](#)

[F-3. NCDOT Gross  
Assets \(HQP\)](#)

[F-4. NCDOT Net  
Assets \(HQP\)](#)

[F-5. Statewide  
Gross Assets](#)

[F-6. Statewide Net  
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[F-7. Riparian Buffer  
Gross Assets](#)

[F-8. Riparian Buffer  
Net Assets](#)

[F-9. Nutrient Offset  
Program Gross  
Assets](#)

[F-10. Nutrient Offset  
Program Net Assets](#)

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



# Regulatory Addendum

## Addendum I. - Requirement Ledgers

[I-A. NCDOT Program - Requirement Ledger](#)

[I-B. Statewide Program - Requirement Ledger](#)

[I-C. Riparian Buffer Program - Requirement Ledger](#)

[I-D. Nutrient Offset Program - Requirement Ledger](#)

## Addendum II. - Asset Ledgers

[II-A. NCDOT and Statewide Stream and Wetland Program - Asset Ledger](#)

[II-B. NCDOT Program - \(HQP\) Asset Ledger](#)

[II-C. Riparian Buffer Program - Asset Ledger](#)

[II-D. Nutrient Offset Program - Asset Ledger](#)

[Addendum III. - Advance Credit Ledger](#)

[Addendum IV. - Action Strategies](#)

[Addendum V. - River Basin Map](#)

[Addendum VI. - Ecoregions Map](#)



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