



Nutrient Credits for Norfolk State University

07.06.2026



NORFOLK STATE
UNIVERSITY



Overview

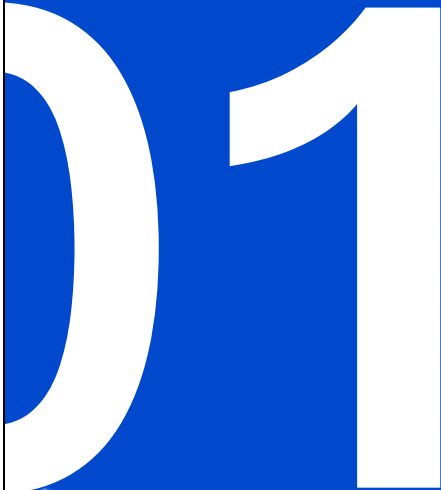
01 // MS4 PERMIT OVERVIEW

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03 // SOLUTION & PRICING

04 // NUTRIENT CREDIT OVERVIEW





MS4 PERMIT OVERVIEW



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MS4 OVERVIEW



Municipal Separate Storm Sewer System (MS4)

NSU holds a MS4 permit that is regulated by DEQ (Department of Environmental Quality).

MS4 permits were established to prevent pollution from entering nearby bodies of water.

MS4 permits require the reduction of quantities of Total Phosphorous (TP) and Total Nitrogen (TN) pollutants. These are measured in pounds removed per year.

NSU's MS4 Permit

- Each MS4 permit holder was given percentages of pollutant removal requirements in 3 phases. NSU is now in Phase 3.
- The total pollutants that NSU must remove through Best Management Practices (BMPs) on campus, Street Sweeping, or the purchase of nutrient credits over all 3 phases is:
 - 87.21 lb./yr. TN
 - 21.85 lb./yr. TP
- Through the BMPs on campus and street sweeping practices, Phases 1 and 2 have removed:
 - 75.71 lb./yr. TN
 - 11.51 lb./yr. TP
- Phase 3 requires the follow pollutant removals:
 - 11.50 lb./yr. TN
 - 10.34 lb./yr. TP

- Street sweeping is a practice implemented on campus and removals are reapplied annually. Typical removal rates:

- 8.42 lb./yr. TN
- 4.21 lb./yr. TP

Item	Total Nitrogen (lb/year)	Total Phosphorous (lb/year)
*MS4 Requirements for all Phases	87.21	21.85
Phase 3 Reduction Requirements	11.50	10.34
Phase 3 Reduction including Street Sweeping	3.08	6.13

*Achieve Requirements by October 31, 2028.



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BMP DECOMMISSIONING

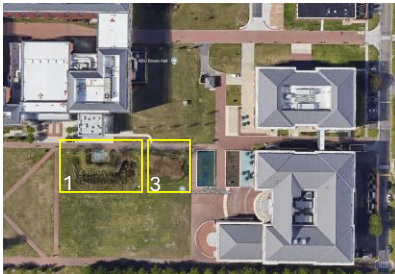


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BMPs 1&3 DECOMMISSIONING

- The two BMPs in front of the Student Center are BMPs 1 and 3. These BMPs contribute to the pollutant reductions on campus in the amounts of:
 - 10.38 lb./yr. TN
 - 1.25 lb./yr. TP
- Decommissioning these BMPs would *increase* the Phase 3 required reductions by those amounts. The Phase 3 required reductions would then become:
 - 13.46 lb./yr. TN
 - 7.38 lb./yr. TP



Item	Total Nitrogen (lb/year)	Total Phosphorous (lb/year)
*MS4 Requirements for all Phases	87.21	21.85
** NEW Phase 3 Reduction Requirements	13.46	7.38

*Achieve Requirements by October 31, 2028.

**Reduction amount after decommissioning BMPs 1 & 3 and scheduled street sweeping.





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SOLUTION AND PRICING



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SOLUTION & PRICING – SOLUTION 1



- 01 Decommission BMPs 1&3
- 02 Install new BMP in front of library
- 03 Purchase the amount of nutrient credits needed to achieve the remaining reduction requirements.

SOLUTION & PRICING – SOLUTION 1

Total Cost

Decommissioning
of BMP 1&3

Installation of New
BMP

Nutrient Credit
Purchasing Cost



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SOLUTION & PRICING – SOLUTION 2

Total Cost

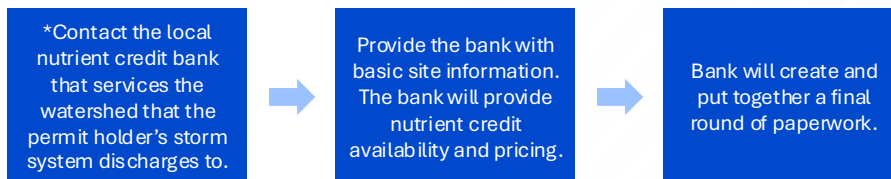
Decommissioning
of BMP 1&3

Nutrient Credit
Purchasing Cost

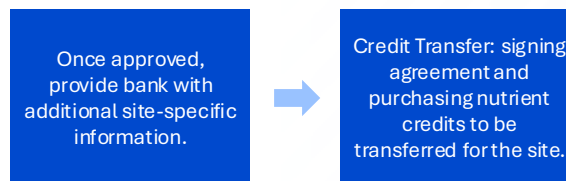
Purchasing is the only step;
no maintenance is required
after purchasing.

*Nutrient credit price estimate will be provided by the nutrient bank and vary based on availability and demand. December 2025 estimates ranged from \$9,500-30,000 /lb of phosphorous

NUTRIENT CREDIT PURCHASING PROCESS



*This process is specific to Virginia Nutrient Banks



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NUTRIENT CREDIT
OVERVIEW

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NUTRIENT CREDIT OVERVIEW

Nutrient credits are purchased, transferred, and applied to aid in a MS4 permit holder's required pollutant reduction.

The needed credits are bought from a nutrient credit bank by a permit holder who cannot meet reduction requirements from on-site measures.

With nutrient credits, the required pollutant reduction can be achieved off-site and not solely through on-site measures.

Due to limited space on NSU's campus, purchasing credits is a viable option to meet reduction requirements.

Nutrient Credit Banks:

- Generate and sell nutrient reduction credits through approved practices.
- Credits are reviewed by DEQ.
- Credits are then traded to VPDES (Virginia Pollutant Discharge Elimination System) and VSMP (Virginia Stormwater Management Program) permitted holders.

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- SWaN (Stream, Wetland, and Nutrient) is a credit trading platform that connects nutrient banks to permit holders and consultants. Users can search for available nutrient credits by specific watersheds as well as access market analytics.
- RIBITIS (Regulatory In-lieu Fee and Bank Information Tracking Systems) from USACE (U.S. Army Corps of Engineers) provides credit information.
- RES (Resource Environmental Solutions) is one of the largest credit providers in the U.S.



Thank You



REFERENCES

- [Nutrient Trading | Virginia DEQ](#)
- [Forms \(9VAC25-890\)](#)
- [§ 62.1-44.19:21.1. Sediment credit use by regulated MS4s](#)
- [§ 62.1-44.19:21. Nutrient credit use by regulated entities](#)
- [NEWS RELEASE: DEQ Launches Innovative Mitigation and Nutrient Credit Trading Platform](#)
- [Municipal Separate Storm Sewer System \(MS4\) Permit - Stormwater | Virginia DEQ](#)
- [WQT Project Summary Report](#)
- [Our Process for Purchasing Nutrient Credits](#)