Nutrient Credit Program

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MS4 Program
Central Office – Richmond VA
September 16, 2015
Virginia Law and Regulations
Offsite Compliance Options
9VAC25-870-69

The change allowed the opportunity to utilize offsite options to address the post-construction stormwater managements requirements for the project improvements.

One option is the purchase of nutrients credit from an approved VA Department of Environmental Quality (DEQ) nutrient credit bank.
The use of Nutrient Credits as an approved offsite option

In order for a project to qualify for the use of nutrient credits, the project must meet one of the following criteria:

• Less than 5-acres of land disturbance, or

• The post-construction phosphorus reduction requirement is less than 10 pounds per year, or

• If items 1 and 2 are not met
  • At least 75% of the required phosphorus load reduction can be met onsite
    • the remaining load reduction (up to 25%) may be met through the purchase of nutrient credits.
The Impetus for Nutrient Credit Trading

Cost saving to the Virginia tax payers

- Project saving on design and constructions cost
- Purchasing of additional project right-of-way
- Program savings on the yearly BMP maintenance cost
  Program savings on the yearly BMP inspection and inventory
### Table 5. Cost Savings of Participation in Water Quality Trading (WQT) In Lieu of Construction of BMPs

<table>
<thead>
<tr>
<th>BMP ID</th>
<th>BMP Cost per Pound of Annual Phosphorus Removal</th>
<th>Credit Cost</th>
<th>Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excluding ROW</td>
<td>Including ROW</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>$18,545.89</td>
<td>$31,540.61</td>
<td>$20,000</td>
</tr>
<tr>
<td>2</td>
<td>$35,527.32</td>
<td>$53,884.30</td>
<td>$20,000</td>
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<tr>
<td>3</td>
<td>$15,152.52</td>
<td>$20,096.50</td>
<td>$19,000</td>
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<tr>
<td>4</td>
<td>$21,604.80</td>
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<td>5</td>
<td>$40,052.86</td>
<td>$50,469.73</td>
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<td>6</td>
<td>$37,535.42</td>
<td>$48,552.88</td>
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<td>$31,522.45</td>
<td>$36,199.35</td>
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<td>8</td>
<td>$46,735.48</td>
<td>$54,759.91</td>
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<tr>
<td>9</td>
<td>$54,852.59</td>
<td>$74,943.71</td>
<td>$18,700</td>
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<tr>
<td>Median</td>
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<tr>
<td>Average</td>
<td>$33,500</td>
<td>$44,770</td>
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</tr>
</tbody>
</table>

BMP = best management practice; ROW = right of way.

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**Center for Watershed Protection**

**Price of Gold (Wall Street)**

- Equivalent cost of constructing stormwater practices = $29,000 per lb of P removed, exclusive of maintenance
- Equivalent cost of constructing stormwater practices = $38,400 per pound of P removed inclusive of maintenance
- Price of Gold = $1,200 per ounce or $19,200 per pound
INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Stormwater Management

SPECIFIC SUBJECT:
The Purchase of Nutrient Credits to address Post-Construction Water Quality Reduction Requirements for Construction Activities

NUMBER: IIM-LD-251.2

DATE: January 21, 2015

SUPERSEDES: IIM-LD-251.1

APPROVAL:
B. A. Thrasher, P.E.
State Location and Design Engineer
Approved January 21, 2015

Changes are shaded.

CURRENT REVISION

The purchase of nutrient credits to address post-construction water quality reduction requirements for construction activities shall be considered the preferred alternative when available and economically feasible.

EFFECTIVE DATE

These instructions are effective upon receipt.

ACRONYMS

- ASD – Administrative Services Division
- BMP – Best Management Practice
- DCR – Department of Conservation and Recreation
- DEQ – Department of Environmental Quality
- EPA – Environmental Protection Agency
- HUC – Hydrologic Unit Code
- IFB – Invitation for Bid
- IIM – Instructional and Informational Memorandum
DEQ Approved Nutrient Credit Banks
VDOT Procured Nutrient Credit Banks
Nutrient Credit Banks

- Nutrient credits are generated by Nutrient Credit Banks through the construction of BMPs, or more typically, through land use conversion (e.g. converting crop land to forest).
- Nutrient Credit Banks are certified by the SWCB and regulated by the DEQ.
SWM Nutrient Credits

Before

After

CMP

Source: CBNLT-Casey
SWM Nutrient Credits

Before

After

Source: CBNLT-Casey
SWM Nutrient Credits

Before

After

Source: CBNLT-Casey
VDOT’s Typical Project Nutrient Credit Use
Nutrient Credit Purchase Summary

VDOT has purchased 160 pounds of Nutrient Credits in the
• Potomac
• James
• York
• Rappahannock River Watersheds
What Could Improve VDOT’s Current Nutrient Credit Program?
Nutrient Credit Program

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