VCAP Maintenance & Inspection

2021 Graves Mountain Lodge VACDE Training Session
Agenda

- Welcome & Introductions 1:00 - 1:10
- VCAP Recap & Funding Update 1:10 - 1:20
- Virtual Public Forum Feedback Review 1:20 - 1:35
  - 10 min Break
- Get Outside & Inspect Rain Garden 2:30 - 3:00
- Group Activity/Discussion/Questions 3:00 - 4:00
Introductions

1. Name
2. District or Affiliation
3. Involvement with VCAP
VCAP Recap

- Recent Training Events
  - New District Guide to VCAP
- Funding Update
  - 700+ projects completed through PY21
  - Allocated $3.9 Million in cost-share since 2016
- No Manual Updates made for PY22
Review of the 2021 Virtual Public Forum Event

July 20th, 2021
Quick VCAP Process Overview

- Participant works with local SWCD to **submit application**
  - Needs to meet program specifications found in **VCAP Manual**
- **VCAP Steering Committee review**
  - Ranking score determines eligibility - becoming increasingly competitive
  - Emphasis on resource concern, pollutant removal efficiency, & cost efficiency
- **Project installation**
- **Final inspection** by SWCD
- **Final request for reimbursement**
- **Maintenance** - 10 year lifespan
VCAP Maintenance Policies
VCAP Maintenance Policies

- Homeowner Liability
- District Responsibility
  - Spot Check Forms
- Transfer of Ownership
- Worst Case - Repayment
Maintenance Requirements
Summarized Here:

Participants are required to maintain VCAP BMPs for 10 years, with the lifespan start-date beginning on January 1st of the calendar year following payment request approval. Property owners must complete a Landowner Agreement or Form 3, that outlines the basic maintenance agreement and liabilities VCAP participants agree to. Site-specific operation and maintenance plans should be developed and included in the application package. This should include routine maintenance such as removal of debris, weeds, etc. Non-routine maintenance should also be planned for, such as broken structural components or other major repairs that may be necessary. Refer to the Operation and Maintenance section of each BMP type in the Manual, or the Virginia Stormwater BMP Clearinghouse for more specifications.

In order to ensure BMPs are maintained and viable through the lifespan requirement, Districts are required to perform periodic Spot Checks:
- A random twenty-five percent (25%) of all active contracts should be spot-checked annually using the provided Spot Check Forms.
- It is important for the district to maintain proper documentation of the project from the initial site visit, inspection of the completed BMP, and spot checks. The District should keep all photographs and inspection forms on file AND submit all completed Spot Check Forms to the VCAP Coordinator & Assistant Coordinator.

If a BMP is found to not meet the required specifications or is destroyed, notification of corrective action from the District will be necessary. More details on corrective action, repayment, and hardship exemptions can be found in Section 1.8 of the VCAP Manual.

Refer to the recording of this VCAP Training to learn maintenance specification for each BMP type.
Property Owner Responsibility

- Maintain BMP as outlined in the applicant's Operation and Maintenance Plan for 10 years (Bottom of VCAP Form 2)
- Important to have a strong maintenance plan included in the application (Regular/Seasonal, & As-Needed)
- Required to notify district if transfer of ownership occurs
“The Landowner accepts responsibility for the maintenance of the BMP for the duration of its project lifespan. The Landowner shall be responsible for maintaining the practice as per installation.”
District Responsibility - District Boards vote to approve all VCAP BMPs & accept this liability

- Ensure that participants adhere to the maintenance agreement through Spot Checks.
- Maintain status of Spot Checks - share Spot Check forms with VCAP staff, & inform District Board & Steering Committee of any corrective action needed.
- Districts shall ensure that BMP maintenance is continued regardless of transfer of control of property. (VCAP Form 4)
Spot Checks

- One-page form - specific for each BMP type
- Notify property owner before conducting visit
- A random 25% selection of all active projects should be checked by the District annually

Spot Check Inspection Forms for each BMP can be found [here](#)
Please check all that apply (If ‘yes’ is marked, then corrective actions are required). Use N/A wherever it is not applicable.

<table>
<thead>
<tr>
<th>Inspection Item</th>
<th>YES/NO or N/A</th>
<th>Comments/Description</th>
<th>Corrective Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are gutters, downspouts or pretreatment measures clogged with sediment and debris?</td>
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<tr>
<td>Are the downspout connections leaking or cracked?</td>
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<tr>
<td>Is the Cistern lid, vents, screens or spigots damaged or dysfunctional?</td>
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<tr>
<td>Is the pad cracked or shifted?</td>
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<tr>
<td>Are sediment and debris accumulating in the cistern tank? Accumulation in excess of 5% of volume?</td>
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<tr>
<td>Is Algae growing in the cistern?</td>
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<td>Are mosquitos larvae present in the cistern?</td>
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<td>Signs that the water is stagnant, including odor or coloration?</td>
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<tr>
<td>Visible signs of erosion or clogging at the overflow discharge point?</td>
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<tr>
<td>Is the overflow pipe leaking or cracked?</td>
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</tbody>
</table>

Additional Comments (Attach photos as needed):

_____________________________________________________________________________

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_____________________________________________________________________________

Condition of Practice:   _____ Good   _____ Needs Maintenance   _____ Failed or Removed

If Applicable, Corrective Action Due Date: ________________________

**A copy of Spot Check Form & photos should be sent to VCAP Coordinator**
Purpose of Spot Checks - Visible Inspection

- Not a technical inspection - only done at BMP Verification for Payment Request
- Determine practice existence and viability during the project lifespan
- Identify any corrective action needed for BMP to continue to function

More information can be found in Section 1.8 Program Compliance and Corrective Action of manual
Importance of Documentation Throughout VCAP Process!

- May have to inspect BMP that you were not involved in/remember design
  - Helpful to have photos from installation, BMP Verification, or past spot checks to compare
    - Education tool to see BMP progress
- Application & Payment Request serve as a baseline for District to look back on to ensure its properly maintained as approved
  - Document design changes throughout installation process
- Important to know boundaries of BMP - what exactly needs to be maintained
Shared Spaces -
HOA’s, Places of Worship, Schools, Parks, etc.

- If lawn care company works on site, communicate or flag off areas needed to be avoided
- Signage may be helpful in public spaces to avoid unintentional damaged (ex. by children playing)
- As such groups often have turnover of responsible parties -
  ○ Ensure responsibility is passed down as necessary, and newly responsible is educated on BMP
  ○ Importance of clear, written Operation & Maintenance plan
10-Year Maintenance of a BMP:

- Property owner responsible for seasonal & as-needed maintenance specific to each BMP.

- District will determine if practice remains viable with **Spot checks**, throughout project lifespan, randomly selecting 25% of active projects in their District each year.

**BMP Lifespan Begins:**
Jan. 1st of following calendar year of payment approval

**Maintenance** by property owner or a contractor, and District spot checks

End of “official” BMP lifespan
Program Compliance & Corrective Action Policies
If Found to Need Maintenance....

Condition of Practice:  ____ Good  ____ Needs Maintenance  ____ Failed or Removed
If Applicable, Corrective Action Due Date:  District set their own deadline for requiring proof of maintenance

- District to offer suggestions how to correct before becomes larger issue
- Set a reasonable deadline to make maintenance corrections
- Follow up to ensure maintenance was complete
Examples of Maintenance Scenarios:

Small fixes:
- pick up litter
- weeding
- seed bare areas around BMP
- replenish mulch or vegetation
- correct blocked inlet/outlet
- remove invasives in the area
- change mowing frequency
- wildlife fencing
- etc.

Larger issues:
- evidence of clogging in some areas of BMP
- storm destruction
- structural issues (i.e underdrain clogged)
- sediment caking killing vegetation
- standing water in some areas of BMP

Click here to view previous training on BMP specific scenarios and maintenance recs.
Dead vegetation

Replenish mulch on edges

Disconnected structural piping

Stone Inlet sediment buildup
BMP Failed or Requires Corrective Action....

Condition of Practice:  ___ Good  ___ Needs Maintenance  X  Failed or Removed
If Applicable, Corrective Action Due Date:  Maximum of 6 months following written notification

Example:
- Entire BMP removed
- Evidence of major clogging i.e. vegetation growing in Permeable Pavement
- BMP no longer functioning i.e. Rain Garden doesn’t drain
Procedures for Failing to Maintain a BMP

- If BMP is found to be destroyed, not meeting specifications, or removed altogether- District will contact participant with notice of corrective action needed
- District should clearly document reasons for corrective action needed at Spot Check Inspection
- We want to work with property owners to fix issues, be understanding & reasonable
  - 6 month grace period to repair BMP, District to reinspect after that time

More details can be found in section 1.8 B of the manual
Repayment

- When deemed necessary by District Board, participant may be required to **pay pro-rated cost share back** to the district
  - As of PY2021, Lifespan starts Jan 1st of following calendar year of payment approval
- In the case of death of a participant, repayment may be waived
- For severe circumstances, written submission of a “**cost-share repayment hardship exemption**” should be submitted to the steering committee
Transfer of Ownership

- In cases where a change in ownership of the land occurs, the participant may complete an Agreement Transferring BMP Responsibility (Form 4) to relieve them of responsibility for the practice by transferring it to the new owner.
- If property owner moves & new owner does not wish to accept liability, repayment shall be paid back to the district based upon a prorated amount (*Preferred method*)
  - If this form is not completed, the original participant continues to be the responsible party regardless of ownership of the subject property
Common Questions

- Does the district need to do an infiltration test at the spot check?
- Is a professional always needed to do maintenance? Or DIY?
- Property owner with multiple VCAP BMPs?
- Are projects subject to policies at the time of project approval?
- Can participants create their own maintenance agreements between parties?

- Other Questions or scenarios to discuss?
Final Activity & Group Discussion
Common CL Maintenance Issues

Possible Reasons:
- Erosion; Potential sediment clogging
- Pests or disease
- Drought conditions
- Improper mowing
- Standing water

good condition
## General CL Maintenance

### During Establishment Phase
- Water every three days during first month; water weekly during first growing season. After establishment, water only during extended periods of drought.
- Anticipate ~10% plantings to fail, plan accordingly
- After heavy rains, check inlets and overflow for debris or leaf blockage
- Remove weeds by hand, monthly, for first growing season

### Annually
- Survey planted area for invasives species, survival and losses - *Required 75% survival rate throughout 10 year lifespan.*
- In March or April: If needed, mow no more than twice a year, check for winter damage, add mulch to bare areas if desired (2-3 in)
- In Winter: prune trees/shrubs during dormancy - considering species-specific pruning recommendations.

### As needed
- Remove trash or debris
- Remove invasives, weeds, and dead or diseased plants using recommended control methods
- Ensure pests, deer, or other animals do not interfere with vegetation establishment/growth
- Check for signs of erosion; stabilize any bare areas

References: Cheryl Carson & the Chesapeake Bay Landscape Professional Program; Watershed Stewards Academy Rainscaping Manual
Common PP Maintenance Issues

- Site Not Stabilized - Could clog pavers
- Sediment build up in joints between pavers
- Surface Ponding
- Leaves

Sources:
# General PP Maintenance

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<tr>
<th>Upon Installation</th>
<th>For the first 6 months, inspect the practice &amp; CDA at least twice after storm events larger than ½ in of rainfall.</th>
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| 2-4 Times Per Year (depending on use) | Conduct maintenance inspection  
Vacuum pavement, leaf blow, or dry sweep pavers per manufacturer or contractor instructions. Avoid water spraying with sweeping or vacuuming gas may cause subsurface clogging.  
Check downspouts or other inlets to make sure clear of accumulated sediment |
| Annually | Check inlets and pretreatment cells for flow diversion, sediment buildup, or structural damage. Remove any sediment.  
Inspect surface material, observation well, underdrain, and drainage area |
| Every 2-3 years | Replace any fine stone joint material  
Use a specialized Vac truck to clean problem areas |
| As Needed | Remove any debris deposited on pavement  
Repair or replace broken pavers  
Weed grass-pavers |

References: Cheryl Carson & the Chesapeake Bay Landscape Professional Program; Watershed Stewards Academy Rainscaping Manual