Virginia's Nonpoint Source Implementation Best Management Practice Specifications

Amended 7/1/2024

The following section includes detailed specifications for best management practices specific to the DEQ NPS implementation program.

For Demonstration BMPs, please refer to section 3.5 of the *Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines* for more information.

SMALL ACREAGE GRAZING SYSTEMS
FOR TMDL IMPLEMENTATION
DEQ Specifications for No. SL-6AT

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Small Acreage Grazing Systems* best management practice (BMP) in targeted TMDL implementation areas.

A. Description

It is designed to reduce soil erosion in pastures and to prevent those areas exposed to heavy livestock traffic from experiencing excessive manure and soil losses due to the destruction of ground cover and eliminate direct access to or a direct runoff input to live streams. Alternative livestock are addressed as pollutant sources in TMDLs.

B. Purpose

Small acreage grazing systems frequently require the use of a heavy-use area to remove livestock from pastures in wet conditions or when the pastures need to rest and recover. These sacrifice area paddocks quickly become denuded of vegetation and may harbor undesirable plants. Conditions in these paddocks are often unfavorable to livestock as well as the surrounding environment due to the build-up of manure in the paddock and the erosion and runoff transporting bacteria that may take place on denuded soil.

The intent of this practice is to prevent manure and sediment runoff from heavy use areas and pastures from entering watercourses and to capture a portion of the manure as a resource for other uses, such as fertilizer. This is accomplished by dividing the pasture into grazing paddocks. Livestock is rotated from paddock to paddock as is necessary to maintain a permanent vegetative cover. One lot is stabilized and designated as a heavy-use area for use in periods of wet weather and when grass in the grazing paddocks needs to rest and re-grow to the appropriate grazing height.

C. Policies and Specifications

1. Cost-share and state tax credit are authorized to protect surface water, supply water, and troughs and to stabilize a heavy-use area.
    i. No structural or management practice is capable of compensating for the damage to soil and water quality from extreme over-stocking of livestock; therefore, cost-share and tax credit will not be authorized for any operation where the stocking rate exceeds two (2) animal units (1,000-pound equivalent) per acre on existing pastures.
    ii. A stocking rate of no greater than two (2) animal units (1,000-pound equivalent) per acre must be maintained throughout the 10-year lifespan of the practice.

2. A grazing management plan, practice design, and operation and maintenance (O&M) plan are to be developed with consultation from a VCE Agent specializing in the alternative livestock (if available) and NRCS and/or SWCD. An animal waste management system plan shall be developed as required by NRCS standard 561-Heavy Use Protection.

3. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et SL-6A - 3 seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

4. A minimum of three (3) grassed grazing paddocks is required.

5. A heavy-use (sacrifice) area is required.
   i. Manure, hay, bedding, and other organic materials must be removed from the sacrifice area at intervals outlined in the operation and maintenance (O&M) plan. The sacrifice area must be maintained in a sanitary condition that does not allow for the accumulation of manure or the creation of mud.
   ii. The sacrifice area should be sized to allow 600 to 1,000 square feet per animal unit (1,000-pound equivalent). Consideration should be given to the age, sex, breed, and behavioral characteristics of the animals when determining the final size and number of sacrifice areas needed. The heavy-use area shall be sloped, not to exceed 10% maximum.
   iii. Divert surface water and roof runoff away from the sacrifice area.
   iv. Provide filtering of runoff from the heavy-use area.
   v. The primary use of the heavy-use area shall be within the purpose of establishing a small acreage grazing system. Design considerations shall not be given to its use as a riding or exercise area or any purpose other than to perform its water quality benefit.

6. Each grassed grazing paddock will be sized based on soil type, topography, and herd size and be maintained in at least 80% coverage of permanent forage.

7. Livestock must be excluded from all streams. A minimum 35-ft. wide vegetated buffer shall be maintained directly adjacent to all streams, ponds, and other watercourses.

8. Walkways may be installed to facilitate herd movement from the barn to the heavy use area and grazing paddocks. Walkways are to be designed in accordance with NRCS standard 575 (Animal Trails and Walkways).

9. In order for the forage in the grass paddocks to take up nutrients such as nitrogen, it must be managed for growth and harvested for hay or pasture.

10. Critical eroding and sensitive areas will be fenced out and permanent cover established.

11. An Animal Waste Management System plan shall be developed as required by NRCS Standard 561-Heavy Use Protection.

12. Cost-share and tax credit are authorized for: watering facilities, stream exclusion and interior paddock fencing, excavation and site preparation, geotextile fabric, stone, pipeline, and watering troughs. Cost-share and tax credit are not authorized for heavy use sacrifice areas that exceed the allowable sizing limitation as outlined in (5) (ii), or the designated use requirement in 5 (v).

13. This practice is subject to the requirements of applicable NRCS Standards. These may include 342 Critical Area Planting, 362 Diversion, 376 Roofs and Covers, 382 Fence, 391 Riparian Herbaceous Cover, 393 Filter Strip, 412 Grassed Waterway, 516 Livestock Pipeline, 528 Prescribed Grazing, 558 Roof Runoff Structures, 561 Heavy Use Area Protection, 574 Spring Development, 575 Trails and Walkways, 614 Watering Facility, and 642 Water Well.

14. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of installation. The lifespan begins on January 1 of the calendar year following the year of implementation. By accepting either a cost-share payment or a state tax credit for this practice, the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the SWCD throughout the lifespan of the practice, and failure to maintain the practice may result in reimbursement of cost-share and/or tax credits.

D. Rate(s)

1. A rate based on 50% of the cost of all eligible components has been established. Cost-share may be from state or federal funds. The cost-share payment amount will not exceed $15,000.

2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia law currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost, not to exceed $17,500.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

E. Technical Responsibility

Technical and administrative responsibility is assigned to qualified technical DCR and SWCD staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Certified Nutrient Management Planner(s), NRCS, DOF, and VCE, if deemed necessary. Individuals certifying technical need and technical practice installation shall have appropriate certification as identified above and/or Engineering Job Approval Authority (EJAA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

Revised March 2022

DEMONSTRATION BMP ONLY

(implementation requires pre-authorization by DEQ)

SMALL SCALE MANURE COMPOSTING FOR EQUINE OPERATIONS – STATIC SYSTEMS

DEQ Specifications for No. EM-1T

This document specifies terms and conditions for a small-scale manure composting practice for static systems. The terms and conditions are applicable to all contracts signed between Districts and applicants statewide.

A. Description and Purpose

A small-scale manure composting practice is a system designed to manage solid waste from areas where horses and other small barn-lot animals are concentrated. This practice is designed to provide for the storage and composting of livestock waste so as to control surface runoff from facilities and permit the safe recycling of animal waste onto the land.

To improve water quality through the proper storing, composting, and spreading of waste on small-scale livestock operations.

B. Policies and Specifications

1. Eligibility: Funding is available for existing livestock operations where the operation can show the following:
   i. It does not meet the agricultural eligibility requirements set forth in either the Federal or State BMP Cost-share programs.
   ii. Limited access to land for manure applications.
   iii. The farm is willing to participate in a planned approach to improving soil and water quality problems.

2. Practice Development:
   i. Before funding can be approved for construction of a manure composting facility, all reasonable means of reducing the environmental impacts of animal waste from the existing operation must be considered. Lack of space for relocation, economic inefficiency, or other factors may be considered. Furthermore, all livestock must be excluded or enrolled in a program to exclude livestock from all streams on the tract before funding is provided.
   ii. The applicant is required to sign a "Manure Composting Structure Agreement," which addresses the minimum criteria prior to receiving any funds.

3. Funding is authorized:
   i. For animal waste composting facilities that will contribute to improving the soil or water quality by providing protected storage for waste generated on site.
   ii. For facilities designed and approved by the participating Soil and Water Conservation Districts with the following minimum features:
      a) All designed and approved structural components. All bins will be built from pressure treated lumber, cedar, or a 10-year equivalent for maintenance purposes.
      b) Leveling and filling to permit the installation of an effective system.
      c) BMPs such as diversions or filter strips needed to protect riparian areas from direct runoff from the facility.
      d) A tarpaulin or comparable cover for all composting bins.
      e) An impervious pad if the site has high to very high leachable soils. A clay, stone or concrete/soil mix for moderately leachable soils. For low leachable soils, there is no requirement for an impermeable surface.
      f) For a minimum of 2 composting bins providing 90-120 days of storage for the equivalent of 1-6 animal units (1,000 lbs/AU). All components of the composting system (regardless of funding source) must be designed to finish composting within the design capacity of the system.

4. Funding is <u>not</u> authorized for:
   i. A permanent roof. This does not include a tarpaulin or comparable cover for all composting bins.
   ii. Storage bin doors. This does not include stackable slats, which are a cost-share component of the bin system.
   iii. The provision of electricity to the property or composting system.
   iv. In-ground, top-loaded systems; these systems require significant soils analysis and engineering.
   v. Spreading animal wastes on the land.
   vi. For the portion of the cost of composting structures installed under or attached to buildings that serve as part of the building or its foundation.
   vii. Enlargements of existing storage facilities. Enlargements cannot receive funding unless the original cost-shared storage practice has been in place for 10 years per location.

viii. For animal waste facilities that do not meet local or State regulations.

5. All applicants must have:
   i. An end-use plan or statement for composted manure re-use. If the end-use is to spread back on the horse operation (i.e., pasture fields), then a nutrient management plan including soil test and compost analysis is required. All other uses, including transfer, sale, garden use, and landscaping purposes will not require a NM plan. However, participants are encouraged to coordinate with VCE and their "Healthy VA Lawns" program for guidance.
   ii. Those operations requiring a nutrient management plan must develop the plan in accordance with requirements for nutrient management plan content and procedures as stipulated in the Nutrient Management Training and Certification Regulations. The nutrient management plan should address all pasture or crop acreage where manure will be applied. The nutrient management plan should be implemented and maintained for the life of the practice.
   iii. All appropriate local and state permits before payments are authorized.
   iv. Monitoring documentation to aid in learning how to operate the system efficiently. At a minimum this should include the date, amounts and types of materials added, compost temperature, weather conditions, and actions taken to manage the compost (e.g., turning frequency).

6. This practice may be subject to NRCS standards 317 Composting Facility, 362 Diversion, 558 Roof Runoff Management, 561 Heavy Use Protection, and 590 Nutrient Management.

7. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting a payment for this practice, the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the SWCD throughout the lifespan of the practice, and failure to maintain the practice may result in the participant being required to reimburse cost-share funds.

C. Rate(s)

Payment for implementation of this practice is limited to the available funds within the DEQ grant cost-share program. The payment cannot be combined with any other state or federal cost-share payment and will not exceed 75% of the total eligible cost. The maximum payment for this practice is not to exceed $3,000/bin with pad.

D. Technical Responsibility

Technical and administrative responsibility is assigned to the Soil and Water Conservation District in consultation with DCR Virginia Certified Nutrient Management Planner(s), NRCS, and/or VCE, if deemed necessary. All practices are subject to spot check procedures and any other quality control measures.

February 2018

DEMONSTRATION BMP ONLY
(implementation requires pre-authorization by DEQ)

SMALL SCALE MANURE COMPOSTING FOR EQUINE OPERATIONS – AERATED SYSTEMS

DEQ Specifications for No. EM-1AT

This document specifies terms and conditions for a small-scale manure composting practice for static systems. The terms and conditions are applicable to all contracts signed between Districts and applicants statewide.

A. Description and Purpose

A small-scale manure composting practice is a system designed to manage solid waste from areas where horses and other small barn-lot animals are concentrated. This practice is designed to provide for the storage and composting of livestock waste so as to control surface runoff from facilities and permit the safe recycling of animal waste onto the land.

To improve water quality through the proper storing, composting, and spreading of waste on small-scale livestock operations.

B. Policies and Specifications

1. Eligibility: Funding is available for existing livestock operations where the operation can show the following:
   i. It does not meet the agricultural eligibility requirements set forth in either the Federal or State BMP Cost-share programs.
   ii. Limited access to land for manure applications.
   iii. The farm is willing to participate in a planned approach to improving soil and water quality problems.

2. Practice Development:
   i. Before funding can be approved for construction of a manure composting facility, all reasonable means of reducing the environmental impacts of animal waste from the existing operation must be considered. Lack of space for relocation, economic inefficiency, or other factors may be considered. Furthermore, all livestock must be excluded or enrolled in a program to exclude livestock from all streams on the tract before funding is provided.
   ii. The applicant is required to sign a "Manure Composting Structure Agreement," which addresses the minimum criteria prior to receiving any funds.

3. Funding is authorized:
   i. For animal waste composting facilities that will contribute to improving the soil or water quality by providing protected storage for waste generated on site.
   ii. For facilities designed and approved by the participating Soil and Water Conservation Districts with the following minimum features:
      a) All designed and approved structural components. All bins will be built from pressure treated lumber, cedar, or a 10-year equivalent for maintenance purposes.
      b) Leveling and filling to permit the installation of an effective system.
      c) BMPs such as diversions or filter strips needed to protect riparian areas from direct runoff from the facility.
      d) A tarpaulin or comparable cover for all composting bins.
      e) An impervious pad if the site has high to very high leachable soils. A clay, stone or concrete/soil mix for moderately leachable soils. For low leachable soils, there is no requirement for an impermeable surface.
      f) Air pumps, air pump housing, timers, PVC piping, materials, and designs and component kits for manufactured systems necessary for aerated or passive aerated multi-cell composting.
   iii. For a minimum of 2 composting bins providing 90-120 days of storage for the equivalent of 1-6 animal units (1,000 lbs/AU). All components of the composting system (regardless of funding source) must be designed to finish composting within the design capacity of the system.

4. Funding is <u>not</u> authorized for:
   i. A permanent roof. This does not include a tarpaulin or comparable cover for all composting bins.
   ii. Storage bin doors. This does not include stackable slats, which are a cost-share component of the bin system.
   iii. The provision of electricity to the property or composting system.
   iv. In-ground, top-loaded systems; these systems require significant soils analysis and engineering.
   v. Spreading animal wastes on the land.
   vi. For the portion of the cost of composting structures installed under or attached

to buildings that serve as part of the building or its foundation.

vii. Enlargements of existing storage facilities. Enlargements cannot receive funding unless the original cost-shared storage practice has been in place for 10 years per location.

viii. For animal waste facilities that do not meet local or State regulations.

5. All applicants must have:

   i. An end-use plan or statement for composted manure re-use. If the end-use is to spread back on the horse operation (i.e., pasture fields), then a nutrient management plan including soil test and compost analysis is required. All other uses, including transfer, sale, garden use, and landscaping purposes will not require a NM plan. However, participants are encouraged to coordinate with VCE and their "Healthy VA Lawns" program for guidance.

   ii. Those operations requiring a nutrient management plan must develop the plan in accordance with requirements for nutrient management plan content and procedures as stipulated in the Nutrient Management Training and Certification Regulations. The nutrient management plan should address all pasture or crop acreage where manure will be applied. The nutrient management plan should be implemented and maintained for the life of the practice.

   iii. All appropriate local and state permits before payments are authorized.

   iv. Monitoring documentation to aid in learning how to operate the system efficiently. At a minimum this should include the date, amounts and types of materials added, compost temperature, weather conditions, and actions taken to manage the compost (e.g., turning frequency).

6. This practice may be subject to NRCS standards 317 Composting Facility, 362 Diversion, 558 Roof Runoff Management, 561 Heavy Use Protection, and 590 Nutrient Management.

7. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting a payment for this practice, the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the SWCD throughout the lifespan of the practice, and failure to maintain the practice may result in the participant being required to reimburse cost-share funds.

C. Rate(s)

Payment for implementation of this practice is limited to the available funds within the DEQ grant cost-share program. The payment cannot be combined with any other state or federal cost-share payment and will not exceed 75% of the total eligible cost. The maximum payment for this practice is not to exceed $5,000/bin with pad.

D. Technical Responsibility

Technical and administrative responsibility is assigned to the Soil and Water Conservation District in consultation with DCR Virginia Certified Nutrient Management Planner(s), NRCS, and/or VCE, if deemed necessary. All practices are subject to spot check procedures and any other quality control measures.

February 2018

SEPTIC TANK PUMP-OUT
DEQ Specifications for No. RB-1

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Septic Tank Pump-out* best management practice (BMP) in NPS implementation areas.

A. Description

Maintenance of a conventional or alternative onsite sewage system by having septic tank pumped to remove solids and to inspect septic tank components.

B. Purpose

To maintain the operation and performance of either a conventional or alternative onsite sewage system.

C. Policies and Specifications

1. Cost-share is authorized:
   i. For the pump-out and removal of solids from the septic tank.
   ii. For an inspection of the tank lids and baffles.
   iii. Note: Use of VDH's Septic System Condition Assessment or DEQ's Septic System Inspection Form is required to document this work.

2. A pump-out can occur during routine maintenance of a sewage system. A pump-out can also occur in conjunction with another DEQ-funded residential onsite sewage practice, in which case the pump-out would not be funded as an RB-1 practice; rather, these costs would be included as part of the other practice.

3. Sewage must be handled and transported by a sewage handler having a permit issued by the Virginia Department of Health.

4. The lifespan of this practice is five (5) years. Cost-share is limited to pump-outs that occur no more than once every five years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

5. Cost-share for an RB-1 is not eligible for participants with systems still under lifespan for a practice for which they have received funding from DEQ. For example, if a system is under lifespan for RB-2, RB-2P, RB-3, RB-3M, RB-4, RB-4P, or RB-5 practice, cost-share funding is not eligible.

D. Rate (s)

The cost-share amount is based upon an average estimated total practice cost of $450 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income level (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed

the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see Table RB-1 below):

Table RB-1: Septic Tank Pump-out, rates based upon average total practice cost of $450.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$225	50%	$225
100-120%	55%	$250	65%	$295
81-100%	60%	$270	70%	$315
61-80%	65%	$295	75%	$340
40-60%	75%	$340	85%	$385
<40%	80%	$360	90%	$405

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Revised July 2024

REPLACEMENT OF MALFUNCTIONING ONSITE SEWAGE
SYSTEM OR STRAIGHT PIPE WITH CONNECTION TO PUBLIC SEWER
DEQ Specifications for No. RB-2

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Replacement of Malfunctioning Onsite Sewage System or Straight Pipe with Connection to Public Sewer* best management practice (BMP) in NPS implementation areas.

A. Description

Connecting a residence to an existing sewer line to eliminate a malfunctioning onsite sewage system, an identified non-complying discharging system (e.g., straight pipe), or a system not VDH-approved that can potentially impact water quality. A malfunctioning system could be contributing raw or partially treated sewage on the ground's surface or resulting in a direct source of sewage to adjacent ditches, waterways, or groundwater. A straight pipe can potentially deliver sewage directly to a stream, pond, lake, or river. Sewage refers to water-carried or non-water-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes separately or together with such underground, surface, stormwater, or liquid waste as may be present from a residence. Gray water may also be connected to public sewer via this BMP, but only if in addition to work that connects a residence to an existing sewer line as a replacement of a malfunctioning onsite sewage system or a straight pipe.

B. Purpose

To improve water quality by removing raw or partially treated sewage on the land surface that can enter surface water or groundwater during storm events or sewage that is a direct source of contamination to surface water or groundwater.

C. Policies and Specifications

1. Cost-share is authorized:
   - i. For the connection fee. This is the fee allowing the dwelling to be connected to the public sewer system. This fee may be referred to as a tap fee.
   - ii. For the construction cost associated with a gravity connection of a dwelling to an existing sewer line. This cost is the expense to pipe the waste from the dwelling to the sewer connection point adjacent to property boundary. This does not include the extension of any sewer lines to the property boundary, including extension of a sewer mainline or "trunk" line, but does allow for a lateral connection to the main line adjacent to the property boundary from the home.
   - iii. Gray water (from an identified non-complying discharging system, e.g., straight pipe), often considered kitchen, laundry, shower, or bath water, is considered sewage. If gray water is not connected to an onsite sewage system, this is a source eligible for connection, but only during the repair or replacement of a failing or failed onsite system. Gray water connections to public sewer independent of connections to replace a malfunctioning septic system (conventional or alternative) or straight pipe do not qualify. Costs can include the connection of gray water discharge from a dwelling that is discharging on the ground or in a wet/dry ditch to the existing system that will then be connected to public sewer.

Any plumbing or equipment that is needed inside the dwelling to make the gray water connection to the system is not eligible for cost-share.

iv. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

v. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

vi. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

vii. For the abandonment of the septic tank by a licensed septic contractor. Septic tank abandonment should be performed by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the bottom of the tank so it doesn't hold water, filling it with sand or other suitable fill material and restoring the area to its original condition.

2. A distance from the public sewer that would make this practice technically feasible or cost-effective is generally specified by the local government or public sewer authority. This cost-share practice is the preferred practice for replacing failing septic systems where sewer connections can be made.

3. Proper permitting and inspections must be adhered to in accordance with local and state regulations. Local permit fees are an eligible expense for cost-share including construction permits from the Virginia Department of Health and inspection from the Virginia Department of Health, or a licensed Onsite Soil Evaluator (OSE), or Professional Engineer (PE).

4. VDH must be notified that the sewage system has been taken out of operation and connected to a public sewer with a request that the system be updated in the VDH database.

5. Cost-share is not authorized under this practice for the repair of defective sewer laterals, nor is it authorized for mainline sewer extensions or extension of sewer lines to a line adjacent to the property boundary.

6. "Assignment of On-site Sewage System Practices Cost-share Payment Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the Residential Septic Guidelines.

7. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

D. Rate(s)

The cost-share amount is based upon a total average estimated practice cost of $12,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see Table RB-2 on the next page):

Table RB-2: Connection to Public Sewer, rates based upon average total practice cost of $12,500.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$6,250	50%	$6,250
100-120%	55%	$6,875	65%	$8,125
81-100%	60%	$7,500	70%	$8,750
61-80%	65%	$8,125	75%	$9,375
40-60%	75%	$9,375	85%	$10,625
<40%	80%	$10,000	90%	$11,250

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Revised July 2024

REPLACEMENT OF MALFUNCTIONING ONSITE SEWAGE
SYSTEM OR STRAIGHT PIPE WITH CONNECTION TO PUBLIC SEWER AND PUMP
DEQ Specifications for No. RB-2P

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Replacement of Malfunctioning Onsite Sewage System or Straight Pipe with Connection to Public Sewer* best management practice (BMP) in NPS implementation areas.

A. Description

Connecting a residence via a grinder pump to an existing sewer line to eliminate a malfunctioning onsite sewage system, an identified non-complying discharging system (e.g., straight pipe), or a system not VDH-approved that can potentially impact water quality. A malfunctioning system could be contributing raw or partially treated sewage on the ground's surface or resulting in a direct source of sewage to adjacent ditches, waterways, or groundwater. A straight pipe can potentially deliver sewage directly to a stream, pond, lake, or river. Sewage refers to water-carried or non-water-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes separately or together with such underground, surface, stormwater, or liquid waste as may be present from a residence. Gray water may also be connected to public sewer via this BMP, but only if in addition to work that connects a residence to an existing sewer line as a replacement of a malfunctioning onsite sewer system or a straight pipe.

B. Purpose

To improve water quality by removing raw or partially treated sewage on the land surface that can enter surface water or groundwater during storm events or sewage that is a direct source of contamination to surface water or groundwater.

C. Policies and Specifications

1. Cost-share is authorized:
   - i. For the connection fee. This is the fee allowing the dwelling to be connected to the public sewer system. This fee may be referred to as a tap fee.
   - ii. For the construction cost associated with a gravity connection of a dwelling to an existing sewer line. This cost is the expense to pipe the waste from the dwelling to the sewer connection point adjacent to property boundary. This does not include the extension of any sewer lines to the property boundary, including extension of a sewer mainline or "trunk" line, but does allow for a lateral connection to the main line adjacent to the property boundary from the home.
   - iii. For a grinder pump when a home cannot be served by a gravity sewer/lateral. Typically, a grinder pump is needed when a home is lower than the street or road and/or farther away from the sewer.
   - iv. Gray water (from an identified non-complying discharging system, e.g., straight pipe), often considered kitchen, laundry, shower, or bath water, is considered sewage. If gray water is not connected to an onsite sewage system, this is a source eligible for connection, but only during the replacement of a failing or failed onsite system. Gray water connections to public sewer independent of connections to replace a malfunctioning septic system (conventional or

alternative) or straight pipe do not qualify. Costs can include the connection of gray water discharge from a dwelling that is discharging on the ground or in a wet/dry ditch to the existing system that will then be connected to public sewer. Any plumbing or equipment that is needed inside the dwelling to make the gray water connection to the system is not eligible for cost-share.

v. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

vi. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

vii. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

viii. For the abandonment of the septic tank by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the bottom of the tank so it doesn't hold water, filling it with sand or other suitable fill material and restoring the area to its original condition.

2. A distance from the public sewer that would make this practice technically feasible or cost-effective is generally specified by the local government or public sewer authority. This cost-share practice is the preferred practice for replacing failing septic systems where sewer connections can be made.

3. Proper permitting and inspections must be adhered to in accordance with local and state regulations. Local permit fees are an eligible expense for cost-share including construction permits from the Virginia Department of Health and inspection from the Virginia Department of Health, or a licensed Onsite Soil Evaluator (OSE), or Professional Engineer (PE).

4. VDH must be notified that the sewage system has been taken out of operation and connected to a public sewer with a request that the system be updated in the VDH database.

5. Cost-share is not authorized under this practice for the repair of defective sewer laterals, nor is it authorized for mainline sewer extensions or extension of sewer lines to a line adjacent to the property boundary.

6. "Assignment of On-site Sewage System Practices Cost-share Payment Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the Residential Septic Guidelines.

7. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

D. Rate(s)

The cost-share amount is based upon a total average estimated practice cost of $20,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see Table RB-2P below):

Table RB-2P: Connection to Public Sewer with Pump, rates based upon average total practice cost of $20,500.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$10,250	50%	$10,250
100-120%	55%	$11,275	65%	$13,325
81-100%	60%	$12,300	70%	$14,350
61-80%	65%	$13,325	75%	$15,375
40-60%	75%	$15,375	85%	$17,425
<40%	80%	$16,400	90%	$18,450

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Established July 2024

CONVENTIONAL ONSITE SEWAGE SYSTEM REPAIR
DEQ Specifications for No. RB-3

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Conventional Onsite Sewage System Repair* best management practice (BMP) in NPS implementation areas.

A. Description

Improvements to a failing or failed conventional onsite sewage system to remove the presence of raw or partially treated sewage on the ground's surface to prevent sewage from entering adjacent ditches or waterways or from potentially impacting groundwater. A conventional onsite sewage system refers to a treatment works consisting of one or more septic tanks with gravity, pumped, or siphoned conveyance to a gravity-distributed subsurface drainfield. Sewage refers to water-carried or non-water-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes separately or together with such underground, surface, stormwater, or liquid waste as may be present from a residence.

B. Purpose

To improve water quality by removing raw or partially treated sewage on the land surface that can enter surface water or groundwater during storm events or sewage that is a direct source of contamination to surface water or groundwater.

C. Policies and Specifications

1. Cost-share is authorized:
   - i. For the pump-out and removal of solids from the septic tank.
   - ii. For the replacement or repair of one or more failing or failed components of a conventional onsite sewage system, for which a permit from VDH is required, for: replacement of septic tank and/or partial replacement of absorption lines. Full replacement of absorption lines would be funded as an RB-4 or RB-4P practice.
   - iii. Gray water (from an identified non-complying discharging system, e.g., straight pipe), often considered kitchen, laundry, shower, or bath water, is considered sewage. If gray water is not connected to an onsite sewage system, this is a source eligible for connection, but only during the repair or replacement of a failing or failed onsite system. Gray water connections to public sewer independent of connections to replace a malfunctioning septic system (conventional or alternative) or straight pipe do not qualify. Costs can include the connection of gray water discharge from a dwelling that is discharging on the ground or in a wet/dry ditch to the existing system that will then be connected to public sewer. Any plumbing or equipment that is needed inside the dwelling to make the gray water connection to the system is not eligible for cost-share.
   - iv. For the installation of an inspection port or riser (three inches or larger pipe or structure that allows access to the septic tank for the purpose of evaluating sludge and scum accumulation) or an effluent filter. Cost-share for these components would apply to systems that have a pre-2000 septic tank. In accordance with 12VAC5-610-817 (Maintenance), as of July 1, 2000, all septic tanks shall be designed for routine inspection without being uncovered or have an effluent filter or be designed for reduced maintenance.

v. For the installation of an effluent pump if it is determined during the permitted repair that a pump is needed to make the system work or that the current pump needs to be replaced. Effluent pumps may not be installed or replaced under this practice as a standalone repair, as this would be an RB-3M.

vi. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

vii. For VDH permit fees associated with non-maintenance repairs of conventional onsite sewage system (DEQ will reimburse upon installation and final approval of system by VDH). Applicants can request a waiver from VDH so the costs do not have to be incurred. For example, Applicants with incomes below 200% of the Federal Poverty Guidelines are eligible for a fee waiver.

viii. For the cost associated with design and permitting of the system using an appropriately licensed Conventional (or Alternative) Onsite Soil Evaluator or Professional Engineer (PE).

ix. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

x. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

2. A sewage system repair must be in accordance with a written repair or construction permit from the Virginia Department of Health and inspection from the Virginia Department of Health, or a licensed Onsite Soil Evaluator (OSE), and/or Professional Engineer (PE).

3. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

4. Operation and Maintenance Statement: Acceptance of cost-share funding payment for this practice results in the recipient agreeing to maintain the onsite septic system for a minimum of 10 years. The recipient agrees to refund all or part of the funds received if the practice is found not to meet applicable standards and specifications or if the BMP(s) is/are removed or not properly maintained during the lifespan of the practice. The sale, lease, or changed use of the property will not exempt the recipient from fulfilling this/these requirement(s). Should the property change ownership or leasehold during the lifespan of the practice, the recipient agrees to complete an Agreement Transferring Responsibility for Best Management Practice form signed by all involved parties and submit that signed form to the Subrecipient identified in this agreement. More

information on operation and maintenance can be found in the DEQ BMP Manual and the Residential Septic Guidelines.

5. Exemption to the operation and maintenance requirement: An exemption to the above-referenced operation and maintenance requirement may be granted by the Subrecipient (with approval from DEQ) in the event that a participant connects the residence served by the system to public sewer.
   i. Connection to Public Sewer: The participant is not eligible for cost-share on the RB-2. However, if an exemption is granted, the participant will not be responsible for paying back the prorated cost-share amount remaining on the lifespan of the existing BMP if the participant agrees to maintain the new RB-2 practice for 10 years.

6. If the old septic tank is not usable and is to be replaced, it must be properly abandoned by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the bottom so that it will not hold water, filling it with sand or other suitable fill material, and restoring the area to its original condition.

7. A copy of the VDH-issued permit and the VDH Condition Assessment Form completed by septic installer, VDH, OSE, or a PE must be provided to the Subrecipient upon application for cost-share funding.

8. "Assignment of Residential Septic Practice Cost-Share Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the Residential Septic Guidelines.

9. Cost-share is not authorized:
   i. For construction of a new septic system or existing system upgrade on a lot to accommodate replacement of a residence with a new house or mobile home, nor for the permitted expansion of an existing septic system to accommodate the addition of a bedroom(s) being added to a residence.
   ii. If the septic system is currently under lifespan of another septic BMP. For example, if the participant has already received cost-share for an RB-4 replacement practice, it is still under lifespan, and the system needs a pump-out or repair, then that participant would not be eligible for additional DEQ NPS funds. The only exception to this rule is in cases where the Subrecipient had issued a written and DEQ-approved exemption to the original cost-shared practice, and the Subrecipient issues it with the BMP contract at the time that the original practice was installed (see the Residential Septic Guidelines for more information).

D. Rate

The cost-share amount is based upon a total average estimated practice cost of $7,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this

practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see Table RB-3 on the next page):

Table RB-3: Repair of Conventional Onsite Septic System, rates based upon average total practice cost of $7,500.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$3,750	50%	$3,750
100-120%	55%	$4,125	65%	$4,875
81-100%	60%	$4,500	70%	$5,250
61-80%	65%	$4,875	75%	$5,625
40-60%	75%	$5,625	85%	$6,375
<40%	80%	$6,000	90%	$6,750

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS**

Revised July 2024

CONVENTIONAL ONSITE SEWAGE SYSTEM
FULL INSPECTION AND MAINTENANCE
DEQ Specifications for No. RB-3M

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Conventional Onsite Sewage System Full Inspection and Maintenance* best management practice (BMP) in NPS implementation areas.

A. Description

Maintenance actions to remove the presence of raw or partially treated sewage on the ground's surface to prevent sewage from entering adjacent ditches or waterways or potentially impacting groundwater. This is maintenance of a conventional onsite sewage system that ensures the system functions properly and/or avoids failure and does not require a VDH-issued permit to complete. Includes performing adjustments (e.g., re-leveling) or replacement of worn parts that do not require a construction permit for adjustment or replacement of the component such as motors, pumps, sewer lines, conveyance lines, distribution boxes, header lines or other like components. Maintenance also includes the removal of tree roots from septic tanks and distribution boxes. Maintenance does not include replacement of tanks, drainfield piping, subsurface drainfields, or work requiring a construction permit or licensed septic system installer.

B. Purpose

To correct noted deficiencies of a conventional sewage system as determined by completion of VDH's Septic System Condition Assessment or DEQ's Septic System Inspection Form and inspection by an authorized entity (referring to a licensed septic system contractor).

C. Policies and Specifications

1. Cost-share is authorized:
   i. For the pump-out and removal of solids from the septic tank.
   ii. For inspection of the distribution box or multiple boxes, or other components of the system to determine if the effluent is being properly distributed to the drainfield, and to assess if components of the system are functioning properly.
   iii. For "maintenance" (as defined in 32.1VAC6-1-163 (§32.1-163) Code of Virginia) of the components of a conventional onsite sewage system. Authorized maintenance work includes re-leveling sanitary tees and distribution box(es), flushing conveyance and header lines, replacing motors, replacing a cracked septic tank lid, use of septic risers, and removing roots from septic tank or distribution box.
   *Note: If inspection and maintenance activities identify a situation requiring a licensed Conventional Onsite Soil Evaluator (OSE) to design components of a system, then it is no longer considered "maintenance" and therefore, would require a VDH permit.
   iv. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

v. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

vi. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

2. Operation and Maintenance Statement: Acceptance of payment for this practice results in the recipient agreeing to maintain the onsite septic system for a minimum of five (5) years unless the system is eliminated by connection to public sewer (RB-2). The recipient agrees to refund all or part of the funds received if the practice is found not to meet applicable standards and specifications or if the BMP(s) is/are removed or not properly maintained during the lifespan of the practice. The sale, lease, or changed use of the property will not exempt the recipient from fulfilling this/these requirement(s). Should the property change ownership or leasehold during the lifespan of the practice, the recipient agrees to complete an Agreement Transferring Responsibility for Best Management Practice form signed by all involved parties and submit that signed form to the Subrecipient identified in this agreement. More information on operation and maintenance can be found in the DEQ BMP manual and the Residential Septic Guidelines.

3. Exemption to the operation and maintenance requirement: An exemption to the above-referenced operation and maintenance requirement may be granted by the Subrecipient (with approval from DEQ) in the event that a participant decides to connect the system to public sewer (RB-2).

i. Connection to Public Sewer: The participant is not eligible for cost-share on the RB-2. However, if an exemption is granted, the participant will not be responsible for paying back the prorated cost-share amount remaining on the lifespan of the existing BMP if the participant agrees to maintain the new RB-2 practice for 10 years.

4. Cost-Share Applications for "maintenance" (non-permitted) repairs must include a copy of VDH's Septic System Condition Assessment or DEQ's Septic System Inspection Form completed by VDH, OSE, a licensed installer, and/or a licensed operator (if applicable).

5. "Assignment of Residential Septic Practice Cost-Share Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the Residential Septic Guidelines.

6. The lifespan for this practice is dependent on the level of maintenance action. The lifespan for replacing filters and/or pumps, removing roots from a septic tank and/or distribution box, flushing conveyance and header lines, and/or re-leveling a distribution box is five (5) years (Level 1). The lifespan for replacing sewer, header, and/or conveyance lines, and/or replacing a distribution box is 10 years (Level 2). The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

7. Cost-share is not authorized:
   i. For maintenance that stems from construction of new septic system or existing system upgrade on a lot to accommodate replacement of a residence with a new house or mobile home, nor for the permitted expansion of an existing septic system to accommodate the addition of a bedroom(s) being added to a residence.
   ii. For the replacement of light bulbs and fuses, despite those components being included as "maintenance" (as defined in 32.1VAC6-1-163 (§32.1-163) Code of Virginia), as their replacement does not have a direct water quality benefit.

D. Rate

The cost-share amount is based upon an average maximum cost of $6,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see tables RB-3M.1 through RB-3M.3 below):

Table RB-3M.1: Conventional Onsite Sewage System Full Inspection and Maintenance Residential Septic Practice Levels, Lifespan, Practice Cost, and Cost-share Rate

Practice Component	Lifespan	Total Practice Cost	Cost-share Rate
Level 1: Any of the following: Inspection of the distribution box or multiple boxes, or other components of the system, replacing filters and/or pumps, use of septic risers, removing roots from a septic tank, distribution box and/or drainfield, flushing conveyance and header lines, and/or re-leveling a distribution box. Tree removal is permitted to prevent root encroachment in the drainfield and/or other system component	5 years	$3,250	Depending on Income and Fiscal Stress (see Table RB-3M.2)
Level 2: Any items above plus at least one of the following: replacing sewer, header and/or conveyance lines, and/or replacing a distribution box	10 years	$6,500	Depending on Income and Fiscal Stress (see Table RB-3M.3)

Table RB-3M.2: Level 1 Residential Septic Cost-share Table Conventional Onsite Sewage System Full Inspection and Maintenance, rates based upon average total practice cost of $3,250; lifespan of 5 years.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$1,625	50%	$1,625
100-120%	55%	$1,790	65%	$2,115
81-100%	60%	$1,950	70%	$2,275
61-80%	65%	$2,115	75%	$2,440
40-60%	75%	$2,440	85%	$2,765
<40%	80%	$2,600	90%	$2,925

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Table RB-3M.3: Level 2 Residential Septic Cost-share Table Conventional Onsite Sewage System Full Inspection and Maintenance, rates based upon average total practice cost of $6,500; lifespan of 10 years.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$3,250	50%	$3,250
100-120%	55%	$3,575	65%	$4,225
81-100%	60%	$3,900	70%	$4,550
61-80%	65%	$4,225	75%	$4,875
40-60%	75%	$4,875	85%	$5,525
<40%	80%	$5,200	90%	$5,850

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Revised July 2024

CONVENTIONAL ONSITE SEWAGE SYSTEM
INSTALLATION OR REPLACEMENT
DEQ Specifications for No. RB-4

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Conventional Onsite Sewage System Installation or Replacement* best management practice (BMP) in NPS implementation areas.

A. Description

Installation of a conventional onsite sewage system to replace an identified non-complying discharging system (e.g., straight pipe) or installation to replace a failing or failed conventional sewage system.

B. Purpose

To improve water quality by removing raw or partially treated sewage on the land surface that can enter surface water or groundwater during storm events or sewage that is a direct source of contamination to surface water or groundwater.

C. Policies and Specifications

1. Cost-share is authorized:
   - i. For the pump-out and removal of solids from the septic tank.
   - ii. For inspection of the distribution box or multiple boxes, or other components of the system, but only if the inspection is done in conjunction with the installation or replacement of eligible components of a conventional onsite sewage system. An inspection may be to determine if effluent is being properly distributed to the drainfield and to assess if components of the system are functioning properly.
   - iii. For the installation (new construction) or replacement of components of a conventional onsite sewage system including the septic tank, drainfield piping, and subsurface drainfields.
   - iv. Gray water (from an identified non-complying discharging system, e.g., straight pipe), often considered kitchen, laundry, shower, or bath water, is considered sewage. If gray water is not connected to an onsite sewage system, this is a source eligible for connection, but only during the repair or replacement of a failing or failed onsite system. Gray water connections to public sewer independent of connections to replace a malfunctioning septic system (conventional or alternative) or straight pipe do not qualify. Costs can include the connection of gray water discharge from a dwelling that is discharging on the ground or in a wet/dry ditch to the existing system that will then be connected to public sewer. Any plumbing or equipment that is needed inside the dwelling to make the gray water connection to the system is not eligible for cost-share.
   - v. For the installation of an inspection port or riser (three inches or larger pipe or structure that allows access to the septic tank for the purpose of evaluating sludge and scum accumulation) or an effluent filter. Cost-share for these components would apply to systems that have a pre-2000 septic tank. In accordance with 12VAC5-610-817 (Maintenance), as of July 1, 2000, all septic tanks shall be designed for routine inspection without being uncovered or have an effluent filter or be designed for reduced maintenance.

vi. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

vii. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

viii. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

ix. For the cost associated with design and permitting of the system using an appropriately licensed Conventional (or Alternative) Onsite Soil Evaluator or Professional Engineer (PE).

x. For permit fees associated with construction of conventional onsite sewage system (reimbursable upon installation and final approval of system by VDH).

2. A sewage system replacement and all associated construction must be in accordance with a written repair or construction permit from the Virginia Department of Health and inspected from the Virginia Department of Health, and/or a licensed Onsite Soil Evaluator (OSE) or Professional Engineer (PE).

3. The owner or agent shall obtain any other permit(s) as required for the installation/replacement of the conventional sewage system.

4. The owner or agent shall obtain and comply with any designs as required in the Health Department permit.

5. If the old septic tank is not usable and is to be replaced, it must be properly abandoned by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the bottom so that it will not hold water, filling it with sand or other suitable fill material, and restoring the area to its original condition.

6. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

7. Operation and Maintenance Statement: Acceptance of payment for this practice results in the recipient agreeing to maintain the onsite septic system for a minimum of 10 years unless the system is eliminated by connection to public sewer (RB-2). The recipient agrees to refund all or part of the funds received if the practice is found not to meet applicable standards and specifications or if the BMP(s) is/are removed or not properly maintained

during the lifespan of the practice. The sale, lease, or changed use of the property will not exempt the recipient from fulfilling this/these requirement(s). Should the property change ownership or leasehold during the lifespan of the practice, the recipient agrees to complete an Agreement Transferring Responsibility for Best Management Practice form signed by all involved parties and submit that signed form to the Subrecipient identified in this agreement. More information on operation and maintenance can be found in the DEQ BMP manual and the Residential Septic Guidelines.

8. Exemption to the operation and maintenance requirement: An exemption to the above-referenced operation and maintenance requirement may be granted by the Subrecipient (with approval from DEQ) in the event that a participant decides to connect the system to public sewer (RB-2).
    i. Connection to Public Sewer (RB-2): The participant is not eligible for cost-share on the RB-2. However, if an exemption is granted, the participant will not be responsible for paying back the prorated cost-share amount remaining on the lifespan of the existing BMP if the participant agrees to maintain the new RB-2 practice for 10 years.

9. The cost-share application for permitted replacement application must include a copy of the VDH-issued permit and the VDH Condition Assessment Form completed by VDH, OSE, a licensed installer, or a PE (if applicable).

10. "Assignment of Residential Septic Practice Cost-Share Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the Residential Septic Guidelines.

11. Cost-share is not authorized:
    i. For construction of new septic system or existing system upgrade on a lot to accommodate replacement of a residence with a new house or mobile home, nor for the permitted expansion of an existing septic system to accommodate the addition of a bedroom(s) being added to a residence.
    ii. If the septic system is currently under lifespan of another septic BMP. For example, if the participant has already received cost-share for a repair (RB-3 or RB-3M) practice, it is still under lifespan, and the system needs replacement (RB-4), then that participant would only be eligible for additional DEQ NPS funds if using the "Process to Address Change in Need" policy described in Section II: Residential Septic Program Guidelines, sub-section VI.g.

D. Rate

The cost-share amount is based upon a total average estimated practice cost of $12,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see table RB-4 on the next page):

Table RB-4: Conventional Onsite Septic System Installation/Replacement, rates based upon average total practice cost of $12,500.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$6,250	50%	$6,250
100-120%	55%	$6,875	65%	$8,125
81-100%	60%	$7,500	70%	$8,750
61-80%	65%	$8,125	75%	$9,375
40-60%	75%	$9,375	85%	$10,625
<40%	80%	$10,000	90%	$11,250

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Revised July 2024

CONVENTIONAL ONSITE SEWAGE SYSTEM
INSTALLATION OR REPLACEMENT WITH PUMP
DEQ Specifications for No. RB-4P

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Conventional Onsite Sewage System Installation or Replacement with Pump* best management practice in NPS implementation areas.

A. Description

Installation of a conventional onsite sewage system to replace a non-complying discharging system (e.g., straight pipe), which delivers untreated, raw sewage directly to a stream, pond, lake, or river or an installation to correct a malfunctioning conventional sewage system or replace a system not VDH-approved that can potentially impact water quality. A malfunctioning system could be contributing raw or partially treated sewage on the ground's surface or resulting in a direct source of sewage to adjacent ditches or waterways or potentially impacting groundwater. A conventional onsite sewage system refers to a treatment works consisting of one or more septic tanks with gravity, pumped, or siphoned conveyance to a gravity-distributed subsurface drainfield. Sewage refers to water-carried or non-water-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes separately or together with such underground, surface, stormwater, or liquid waste as may be present from a residence.

B. Purpose

To improve water quality by removing raw or partially treated sewage on the land surface that can enter surface water or groundwater during storm events or sewage that is direct source of contamination to surface water or groundwater. Sewage means water-carried and non-water-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes separately or together.

C. Policies and Specifications

1. Cost-share is authorized:
   - i. For the pump-out and removal of solids from the septic tank.
   - ii. For inspection of the distribution box or multiple boxes, or other components of the system to determine if the effluent is being properly distributed to the drainfield, and to assess if components of the system are functioning properly, but only in conjunction with the installation or replacement of eligible components of a conventional onsite sewage system.
   - iii. For the installation (new construction or replacement of components of) a conventional onsite sewage system including the septic tank, drainfield pumping, and subsurface drainfields.
   - iv. For the installation of a pump to move the septic tank effluent from a lower elevation to a conveyance line, distribution box, and ultimately to subsurface drainfields at a higher elevation.
   - v. Gray water (from an identified non-complying discharging system, e.g., straight pipe), often considered kitchen, laundry, shower, or bath water, is considered sewage. If gray water is not connected to an onsite sewage system, this is a source eligible for connection, but only during the repair or replacement of a failing or failed onsite system. Gray water connections to public sewer independent of

connections to replace a malfunctioning septic system (conventional or alternative) or straight pipe do not qualify. Costs can include the connection of gray water discharge from a dwelling that is discharging on the ground or in a wet/dry ditch to the existing system that will then be connected to public sewer. Any plumbing or equipment that is needed inside the dwelling to make the gray water connection to the system is not eligible for cost-share.

vi. For the installation of an inspection port or riser (three inches or larger pipe or structure that allows access to the septic tank for the purpose of evaluating sludge and scum accumulation) or an effluent filter. Cost-share for these components would apply to systems that have a pre-2000 septic tank. In accordance with 12VAC5-610-817 (Maintenance), as of July 1, 2000, all septic tanks shall be designed for routine inspection without being uncovered, or have an effluent filter, or be designed for reduced maintenance.

vii. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

viii. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

ix. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

x. For the cost associated with design and permitting of the system using an appropriately licensed Conventional (or Alternative) Onsite Soil Evaluator or Professional Engineer (PE).

xi. For permit fees associated with construction of conventional onsite sewage system (reimbursable upon installation and final approval of system by VDH).

2. A sewage system replacement and all associated construction must be in accordance with a written repair or construction permit from the VDH and inspection from the Virginia Department of Health, and/or a licensed Onsite Soil Evaluator (OSE) or a Professional Engineer (PE).

3. The owner or agent shall obtain any other permit(s) as required for the installation or replacement of the conventional sewage system.

4. The owner or agent shall obtain and comply with any designs as required in the Health Department permit.

5. If the old septic tank is not usable and is to be replaced, it must be properly abandoned by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the

bottom so that it will not hold water, filling it with sand or other suitable fill material, and restoring the area to its original condition.

6. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

7. Operation and Maintenance Statement: Acceptance of payment for this practice results in the recipient agreeing to maintain the onsite septic system for a minimum of 10 years unless the system is eliminated by connection to public sewer (RB-2). The recipient agrees to refund all or part of the funds received if the practice is found not to meet applicable standards and specifications or if the BMP(s) is/are removed or not properly maintained during the lifespan of the practice. The sale, lease, or changed use of the property will not exempt the recipient from fulfilling this/these requirement(s). Should the property change ownership or leasehold during the lifespan of the practice, the recipient agrees to complete an Agreement Transferring Responsibility for Best Management Practice form signed by all involved parties and submit that signed form to the Subrecipient identified in this agreement. More information on operation and maintenance can be found in the DEQ BMP manual and the Residential Septic Guidelines.

8. Exemption to the operation and maintenance requirement: An exemption to the above-referenced operation and maintenance requirement may be granted by the Subrecipient (with approval from DEQ) in the event that a participant decides to connect the system to public sewer (RB-2).
    i. Connection to Public Sewer (RB-2): The participant is not eligible for cost-share on the RB-2. However, if an exemption is granted, the participant will not be responsible for paying back the prorated cost-share amount remaining on the lifespan of the existing BMP if the participant agrees to maintain the new RB-2 practice for 10 years.

9. The cost-share application for permitted replacement application must include a copy of the VDH-issued permit and the VDH Condition Assessment Form completed by VDH, OSE, a licensed installer, or a PE (if applicable).

10. “Assignment of Residential Septic Practice Cost-Share Authorization” and “Agreement Transferring Responsibility for Best Management Practice” forms for this practice are attached to the Residential Septic Guidelines.

11. Cost-share is not authorized:
    i. For construction of new septic system or existing system upgrade on a lot to accommodate replacement of a residence with a new house or mobile home, nor for the permitted expansion of an existing septic system to accommodate the addition of a bedroom(s) being added to a residence.
    ii. If the septic system is currently under lifespan of another septic BMP. For example, if the participant has already received cost-share for an RB-4 replacement practice, it is still under lifespan, and the system needs a pump, then that participant would not be eligible for additional DEQ NPS funds. The only exception to this rule is in those cases where the Subrecipient had issued a written (DEQ-approved) exemption to the original cost-shared practice, and it is

issued with the BMP contract at the time that the original practice was installed (see the Residential Septic Guidelines for more information).

D. Rate

The cost-share amount is based upon a total average estimated practice cost of $16,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap, associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see Table RB-4P below):

Table RB-4P: Conventional Onsite Septic System Installation/Replacement with Pump, rates based upon average total practice cost of $16,500.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$8,250	50%	$8,250
100-120%	55%	$9,075	65%	$10,725
81-100%	60%	$9,900	70%	$11,550
61-80%	65%	$10,725	75%	$12,375
40-60%	75%	$12,375	85%	$14,025
<40%	80%	$13,200	90%	$14,850

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Revised July 2024

ALTERNATIVE ONSITE SEWAGE SYSTEM INSTALLATION
DEQ Specifications for No. RB-5

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Alternative Onsite Sewage System Installation* best management practice (BMP) in NPS implementation areas.

A. Description

Installation of an alternative onsite sewage system to correct a malfunctioning or failing conventional onsite sewage system, malfunctioning, or failing alternative onsite sewage system, or to replace an identified non-complying discharging system (e.g., straight pipe) in situations where installation or replacement of a conventional onsite sewage system cannot be permitted. An alternative onsite sewage system means a treatment works that is not a conventional onsite sewage system. Sewage refers to water-carried or non-water-carried human excrement, kitchen, laundry, shower, bath, or lavatory wastes separately or together with such underground, surface, stormwater, or liquid waste as may be present from a residence.

B. Purpose

To improve water quality by removing raw or partially treated sewage on the land surface that can enter surface water or groundwater during storm events or sewage that is direct source of contamination to surface water or groundwater.

C. Policies and Specifications

1. Cost-share is authorized:
   - i. For the pump-out and removal of solids from the septic tank.
   - ii. For the installation of an alternative onsite sewage system that may include one or more of the following: aerobic treatment units, low-pressure distribution systems, drip distribution systems, sand filters, elevated sand mounds, constructed wetlands, peat filters, vault privies, incinerator toilets, and composting toilets or other treatment components or methodology approved by the Virginia Department of Health (VDH).
   - iii. Gray water (from an identified non-complying discharging system, e.g., straight pipe), often considered kitchen, laundry, shower, or bath water, is considered sewage. If gray water is not connected to an onsite sewage system, this is a source eligible for connection, but only during the repair or replacement of a failing or failed onsite system. Gray water connections to public sewer independent of connections to replace a malfunctioning septic system (conventional or alternative) or straight pipe do not qualify. Costs can include the connection of gray water discharge from a dwelling that is discharging on the ground or in a wet/dry ditch to the existing system that will then be connected to public sewer. Any plumbing or equipment that is needed inside the dwelling to make the gray water connection to the system is not eligible for cost-share.
   - iv. To cover expenses for up to two years of sampling, operation, and maintenance performed by a licensed Alternative Onsite Sewage System Operator (or approved alternative) and reported to VDH. Only recipients eligible for more than 50% cost share (who have provided income verification) are eligible. An executed contract must be in place before cost-share is provided, and a copy of that

contract is provided as documentation. Documentation of these inspections must be provided upon request.

v. For an inspection port to allow easier access for maintenance activities

vi. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

vii. For tree removal required for onsite sewage system repairs. Subrecipients can approve the inclusion of tree removal as eligible for cost-share as long as a process for reviewing requests for tree removal is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.g).

viii. For repair of disturbance to existing impermeable surfaces (e.g., sidewalks, driveways, etc.) required to complete the practice. Subrecipients can approve the inclusion of required repair to existing impermeable surfaces as eligible for cost-share as long as a process for reviewing requests such repairs is developed by the Subrecipient that meets the minimal eligibility and review requirements in DEQ's Residential Septic Program Guidelines (see Section IV.h).

ix. For the cost associated with design and permitting of the system using an appropriately licensed Alternative Onsite Soil Evaluator or Professional Engineer (PE).

x. For permit fees associated with installation of alternative onsite sewage system (reimbursable upon installation and final approval of system by VDH).

2. The owner or agent shall obtain a written construction permit from the local Health Department.

3. The owner or agent shall obtain any other permit(s) as required for installation of an alternative onsite sewage system and comply with local building codes.

4. The owner or agent shall obtain and comply with any designs as required in the Health Department permit.

5. The installation of the alternative onsite sewage system must be inspected by the licensed Alternative Onsite Soil Evaluator or Professional Engineer who certified the design, and all completion documentation must be provided to the local Health Department and an operation permit issued.

6. If the old septic tank is not usable and is to be replaced, it must be properly abandoned by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the bottom so that it will not hold water, filling it with sand or other suitable fill material, and restoring the area to its original condition.

7. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

8. Operation and Maintenance Statement: Acceptance of payment for this practice results in the recipient agreeing to maintain the alternative onsite sewage system for a minimum of 10 years unless the system is eliminated by connection to public sewer (RB-2). The recipient agrees to refund all or part of the funds received if the practice is found not to meet applicable standards and specifications, or if the BMP(s) is/are removed or not properly maintained during the lifespan of the practice. The sale, lease or changed use of the property will not exempt the recipient from fulfilling these requirements. Should the property change ownership or leasehold during the lifespan of the practice, the recipient agrees to complete an Agreement Transferring Responsibility for Best Management Practice form signed by all involved parties and submit that signed form to the Subrecipient identified in this agreement. More information on operation and maintenance can be found in the DEQ BMP manual and the Residential Septic Guidelines.

9. Exemption to the operation and maintenance requirement: An exemption to the above-referenced operation and maintenance requirement may be granted by the Subrecipient (with approval from DEQ) in the event that a participant decides to connect the system to public sewer (RB-2).
   i. Connection to Public Sewer: The participant is not eligible for cost-share on the RB-2. However, if an exemption is granted, the participant will not be responsible for paying back the prorated cost-share amount remaining on the lifespan of the existing BMP if the participant agrees to maintain the new RB-2 practice for 10 years.

10. The cost-share application for permitted replacement application must include a copy of the VDH-issued permit and the VDH Condition Assessment Form completed by VDH, OSE, a licensed installer, and/or a PE (if applicable).

11. "Assignment of Residential Septic Practice Cost-Share Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the Residential Septic Guidelines.

12. Cost-share is not authorized:
   i. For construction of new alternative onsite sewage system or existing such system upgrade on a lot to accommodate replacement of a residence with a new house or mobile home, nor for the permitted expansion of an existing alternative onsite system to accommodate the addition of a bedroom(s) being added to a residence.
   ii. For fees associated with deed recordation in localities where it is required.
   iii. If the septic system is currently under lifespan of another septic BMP. For example, if the participant has already received cost-share for an RB-3 repair or RB-4/4P replacement practice, it is still under lifespan, and the system needs an alternative system (RB-5), then that participant would not be eligible for additional DEQ NPS funds. The only exception to this rule is in those cases where the Subrecipient had issued a written (DEQ-approved) exemption to the original cost-shared practice and it is issued with the BMP contract at the time that the original practice was installed (see the Residential Septic Guidelines for more information).
   iv. (For practices funded with 319(h) funds only.) For discharging systems requiring a permitted discharge or a discharge that receives a VPDES/NPDES permit.

D. Rate

The cost-share amount is based upon a total average estimated practice cost of $31,500 per practice and will not exceed 50% to 90% of the total eligible cost based on participant income levels (based upon verification) in accordance with *Virginia's Nonpoint Source (NPS) Implementation Best Management Practice (BMP) Guidelines*. The cost-share payment for this practice shall not exceed the BMP estimated average total cost-share cost, known as the practice cap associated with the approved cost-share rate for the participant.

A Subrecipient will request from DEQ the ability to use either the No Fiscal Stress or Fiscal Stress table (see Table RB-5 on the next page):

Table RB-5: Alternative Onsite Septic System Installation, rates based upon average total practice cost of $31,500.

% of Median Family Income	No Fiscal Stress* Rate	No Fiscal Stress* CS Cap	Fiscal Stress** Rate	Fiscal Stress** CS Cap
> 120% or no income verification	50%	$15,750	50%	$15,750
100-120%	55%	$17,325	65%	$20,475
81-100%	60%	$18,900	70%	$22,050
61-80%	65%	$20,475	75%	$23,625
40-60%	75%	$23,625	85%	$26,775
<40%	80%	$25,200	90%	$28,250

*** Located in locality with No Fiscal Stress (average, below average, or no FS)**

**** Located in Locality with Fiscal Stress (high or above average FS)**

Revised July 2024

PET WASTE DISPOSAL STATION
DEQ Specifications for No. PW-1

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Pet Waste Disposal Station* best management practice (BMP) in NPS implementation project areas.

A. Description

Installation and regular maintenance of a pet waste disposal station in a dog walking/exercising area, so that dog waste can be removed and properly disposed of.

B. Purpose

To improve water quality by removing from the land surface raw pet waste that can potentially impact surface water or groundwater during storm events or impact surface water through runoff conveyance into a storm sewer. Pet waste contains bacteria, parasites, and nutrients (nitrogen and phosphorus). Provide pet owners with easy access to plastic or bio-degradable bags for waste pick-up and a trash receptacle to clean up after their pets. Improve the overall aesthetics of the area where the disposal station is located.

C. Policies and Specifications

1. Cost-share is authorized for:
   i. Purchase or construction and installation of a pet waste bag station (waste cans are not required if trash receptacles already exist in public area).
   ii. Purchase of replacement waste bags and trash can liners (terms will be included in DEQ grant agreement with Subrecipient).
   iii. An educational kiosk or signage (often a component of purchased commercial stations) describing why picking up and properly disposing of dog waste benefits water quality.

2. The lifespan for this practice is three (3) years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

3. Pet waste stations are subject to an inspection to verify proper installation as well as periodic spot checks during the three-year lifespan of the BMP to ensure proper maintenance, which includes keeping the station stocked with bags, emptying of garbage cans, and preservation of structural integrity.

4. Stations should be installed in public areas amenable to owners walking and exercising dogs, such as parks, trails, neighborhood common areas, apartment complexes, marinas, campgrounds, and motels.

5. Plans and specifications are to be prepared for each station including: location within the property on a site map, site preparation, installation requirements, and a statement regarding compliance with all federal, state, and local requirements.

D. Rate

The cost-share payment for authorized expenses will not exceed 75% of the total eligible practice cost (not to exceed a total estimated practice cost of $600), which is a cost-share practice cap amount of $450.

Revised June 2017

PET WASTE TREATMENT
DEQ Specifications for No. PW-2

This document specifies terms and conditions that are applicable to all contracts entered into with respect to the *Pet Waste Treatment* best management practice (BMP) in NPS implementation project areas.

A. Description

Installation and regular maintenance of a backyard pet waste digester, composter, or fermentation system, so that dog waste can be collected, and treated and the byproduct can be reused or disposed of in an environmentally safe manner.

B. Purpose

To improve water quality by removing raw pet waste from residential areas that can potentially impact surface water or groundwater during storm events or impact surface water through runoff conveyance into a storm sewer. Pet waste contains bacteria, parasites, and nutrients (nitrogen and phosphorus). Provide pet owners with easy access to pick up and dispose of pet waste in a digester, composter, or fermentation system for biological treatment of the waste. This will reduce the volume of pet waste in plastic bags disposed of in landfills or flushed down toilets for treatment by home septic systems or sewage treatment plants. The average dog produces 274 pounds of waste each year according to USDA Natural Resources Conservation Service.

C. Policies

1. Cost-share is authorized for:
   i. Purchase of a manufactured digester designed for 1-2 or 2-4 dogs, depending on the unit purchased.
   ii. Purchase of manufactured composter or materials for the construction of a composter.
   iii. Purchase of a fermentation system.
   iv. Purchase of treatment enzymes or septic starter supplies for biological treatment process.

2. Digesters, composters, and fermentation units are to be properly maintained according to the manufacturer's recommendations or information provided by source(s) for constructing pet waste composters. The septic-tank style pet-waste disposal system (e.g., *Doggie Dooley*™) is one commercially available digester marketed primarily for use with pet waste. *Bokashi Pet Cycle Fermentation System* is an available on-market fermentation unit.

3. The lifespan for this practice is three (3) years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

4. Digesters, composters, or fermentation systems are subject to an inspection or verification, which can include a photograph of the installed unit to verify proper installation. Each unit must be maintained for at least three (3) years.

5. Digesters are generally installed in the ground with the top at the ground surface. In the placement of the unit, consider a location where there is not a high seasonal water table, so there will be adequate separation between the bottom of the unit and the water table. The liquid waste from the unit, treated with an enzyme, flows into the subsoil which provides additional treatment.

6. Composters may be a manufactured unit or a constructed composter using a trash can with drilled holes around the bottom of the can. Mixing or turning of the composted material may be needed to accelerate the composting process: follow manufacturer's operating procedures for purchased units.

D. Rate

The cost-share payment for authorized expenses will not exceed 50% of the total eligible practice cost (not to exceed a total estimated practice cost of $200), which is a cost-share practice cap amount of $100.

Revised June 2017

DEMONSTRATION BMP ONLY
(Implementation requires pre-authorization by DEQ)
Wastewater Treatment System for Confined Canine Facilities (CCFs)
DEQ Specifications for No. PW-3

This document specifies terms and conditions that are applicable to all cost-share contracts entered into with respect to a wastewater treatment system for a CCF. A CCF may be a boarding establishment, kennel, facility, public or private animal shelter where dogs are kept. A boarding establishment is a place where animals not owned by the proprietor are sheltered and fed. The boarding establishment shall not include any private residential dwelling that shelter and feed dogs not owned by the proprietor. A kennel is any facility where dogs are kept for the purpose of breeding, hunting, training, renting, buying, boarding, selling, or showing. Definitions of facility, public animal shelter and private animal shelter shall be in accordance with Code of Virginia *Section 3.2-6500*.

A. Description

Installation of a non-residential sewage disposal system (referred to as Type II in the Commonwealth of Virginia *12VAC 5-610-250*) to replace an identified non-complying or malfunctioning system that can potentially impact water quality. In addition, installation could include cost-share to install a disposal system at a facility operating without a wastewater treatment system. Wastewater herein refers to water-carried or non-water-carried dog excrement together with liquid waste generated from wash down from CCFs.

Installation of the system must be in accordance with Virginia Department of Health (VDH) regulations. An establishment with a non-existent or malfunctioning system could be contributing raw or partially treated wastewater on the ground's surface. As a result, this could become a direct source of wastewater which could enter adjacent ditches or waterways and/or potentially impact groundwater. A system refers to one or more septic tanks with gravity, pumped, or siphoned conveyance to a gravity-distributed subsurface drainfield.

B. Purpose

To improve water quality by removing raw or partially treated wastewater containing bacteria from dog fecal matter on the land surface that can enter surface water or groundwater during storm events. This wastewater could also be a direct source of contamination to surface water or groundwater.

C. Policies and Specifications

1. Cost-share is authorized for the following activities at CCFs that board a minimum of ten (10) dogs:

   xi. For the pump-out and removal of solids from an existing septic tank prior to the installation of a new wastewater treatment system.
   xii. For the installation of a septic system or the installation of any of the following system components - septic tank(s), conveyance lines, distribution box(s), pump, and subsurface drainfield.

xiii. For sanitary waste plumbing to be connected with CCF plumbing to improve biological treatment of wastewater in the septic tank.

xiv. To provide adequate access to the septic tank(s) for inspection and sludge removal by installing risers extending to the finished ground surface or above. Risers may be provided at both inlet and outlet ends of the tank (if only one is installed, the preference would be the outlet) of the septic tank and shall be a minimum of 18 inches in diameter. VDH requires an access manhole within 18 inches of the ground surface when the tank is in excess of 30 inches deep.

xv. To re-stabilize and establish a vegetative cover on disturbed areas by regrading and planting seed as appropriate. Disturbed areas need to be stabilized by planting seed in accordance with the Virginia Erosion and Sediment Control Standard and Specifications 3.31 (Permanent Seeding) and Specification 3.35 (Mulching). For slopes of 3:1 or greater, use 3.36 (Blankets and Matting).

xvi. For the costs associated with securing written construction permits from the local Health Department, and any other permits as required for the installation of the wastewater treatment system.

xvii. For the cost associated with design of the system using an appropriately licensed Professional Engineer.

xviii. For a waste characterization analysis if required by VDH.

xix. To install fitted traps or filters in the waste plumbing line from the CCF wash down area(s) to remove solid fecal matter, bedding material and dog hair to prevent these materials from accumulating in the septic tank. An effluent filter is recommended at the outlet of the septic tank to further minimize dog hair from entering the drainfield, and is eligible for cost-share.

2. Cost-share will not be provided to any CCF that does not meet applicable state and local licensing requirements.

3. Cost-share is not authorized to fund a wastewater treatment system as part of a new CCF being constructed.

4. Cost-share is not authorized for an existing CCF subject to enforcement actions by local, state, or federal government due to wastewater management deficiencies.

5. The owner or agent shall obtain a written construction permit from the local Health Department in order to install the wastewater treatment system.

6. The owner or agent shall obtain any other permit(s) as required for the installation of the system.

7. The owner or agent shall obtain a system design from a licensed Professional Engineer as required by VDH for non-residential disposal systems.

8. All construction in accordance with the VDH-issued permit must be inspected by a licensed Professional Engineer.

9. Solid dog waste and soiled bedding material should be dealt with as solid waste and be manually collected and landfilled.

10. The owner shall take preventative actions to reduce stormwater from entering the waste stream area.

11. If an existing septic tank is not usable and is being replaced, it must be properly abandoned by a licensed septic contractor. Proper abandonment includes pumping and proper disposal of the tank contents, crushing the tank lids or top into the tank, breaking the bottom so that it will not hold water, filling it with sand or other suitable fill material, and restoring the area to its original condition.

12. The lifespan for this practice is 10 years. The period of lifespan starts on January 1 of the calendar year following the year of installation of the practice.

13. Operation and Maintenance Statement: Acceptance of payment for this practice results in the recipient agreeing to maintain the septic system for a minimum of 10 years unless the system is eliminated by connection to public sewer. The recipient agrees to refund all or part of the funds received if the practice is found not to meet applicable standards and specifications or if the BMP(s) is/are removed or not properly maintained during the lifespan of the practice. The sale, lease, or changed use of the property will not exempt the recipient from fulfilling this/these requirement(s). Should the property change ownership or leasehold during the lifespan of the practice, the recipient agrees to complete a DEQ Agreement Transferring Responsibility for Best Management Practice form signed by all involved parties and submit that signed form to the Subrecipient identified in this agreement. More information on operation and maintenance can be found in the DEQ BMP manual and Residential Septic Guidelines.

14. "Assignment of Residential Septic Practice Cost-Share Authorization" and "Agreement Transferring Responsibility for Best Management Practice" forms for this practice are attached to the DEQ Residential Septic Guidelines.

D. Rate

Cost-share will be made for up to 75 percent of total eligible cost not to exceed a maximum payment of $16,000 per recipient.

January 2021