INTRODUCTION

Agricultural activities can impact the water quality of local streams, waterways, and the Chesapeake Bay. If not properly managed, soil, fertilizer and animal wastes, along with the nutrients they carry, can find their way into groundwater and surface water, causing long-term pollution problems.

The Maryland Agricultural Water Quality Cost-Share (MACS) Program was authorized in 1982 as one of several initiatives to improve water quality and achieve state water quality objectives. It was recognized that the cost of installing agricultural water quality best management practices (BMPs) could impose a financial burden on individual farmers. Although these BMPs improve water quality and achieve public benefits, they don’t necessarily result in any farm income-producing potential to counteract their cost. With that recognition, financial assistance became one of the key components of agricultural non-point source (NPS) pollution control efforts.

As Maryland works toward achieving nutrient reduction and water quality goals, the agricultural community is held accountable for doing its part. The Maryland Department of Agriculture (MDA) has worked to maintain existing voluntary programs. For these reasons, it is essential that we strive to improve upon the responsiveness and efficiency of the MACS Program while ensuring that our use of public funds can meet the test of cost-effectiveness.

This manual assures statewide consistency in the application of the MACS Program. We have compiled eligibility criteria, program policy, BMP information, MACS forms and administrative guidelines into this manual for use as a comprehensive reference by field staff as they assist farmers in implementing BMPs.

The information contained in this document represents current program guidelines. As we continue to refine the program in response to changes in technology, changes in state policy, and changes identified by field staff, sections of the manual will be revised and updated.
GOAL AND OBJECTIVES

Background

Soil Conservation Districts (SCDs) have worked cooperatively with all levels of government to deliver agricultural programs that improve farm management and protect natural resources. Since the origin of the Federal Clean Water Act in the 1970’s, SCDs have responded to guidance documents addressing agricultural management and best management practices (BMPs) to improve and protect water quality. The General Assembly created the MACS Program in 1982 as a key component of the Chesapeake Bay Agricultural Initiative. In 1983, agricultural researchers and agency staff developed a system for prioritizing Maryland watersheds for treatment based on their potential to cause nutrient impacts on the Bay (Priority Watersheds for the Potential Release of Agricultural Non-Point Phosphorus and Nitrogen). This ranking was incorporated into the MACS Program to target funds, and was refined in 1990 (Maryland Chesapeake Bay Cooperative River Basin Study: Nutrient Loading Rankings).

Since its origin, the MACS Program has adapted to the evolving science and goals established to achieve water quality improvements. BMPs are adapted or new ones added as more is learned about their effectiveness in addressing potential impacts to water quality. BMP changes are reviewed and endorsed by the State Soil Conservation Committee to assure they meet program objectives.

Goal

The goal of the MACS Program is to provide financial support to farmers for the installation of BMPs that control and reduce agriculturally related water pollution. Pollution sources could be from erosion, animal wastes, nutrients, or agricultural chemicals. Financial assistance is available to farmers because the BMPs provide public benefits but may not be cost-effective for individual farmers to implement.

Objectives

The MACS Program has been refined over time to address two broad objectives. These objectives, and the mechanisms that have been instituted to meet them, are listed below:

1. **To maximize reduction of nutrient loads caused by agriculturally related sources.**
   - BMPs eligible for cost-share support are selected based on their ability to treat agricultural pollution.
   - BMPs are evaluated for cost-effectiveness to achieve the highest water quality benefits with available funds.
   - Priority watersheds may be used to target funds to those geographic areas where there is the greatest potential for NPS pollution from agricultural sources.
   - Flat rates are utilized to assure realistic costs for installing BMPs.
2. To promote participation in the program by increasing administrative efficiency and responsiveness to participants’ needs.
   - Flat rates are established to reduce the amount of time and effort required on the part of staff and/or the farmer to obtain bids for each proposed project.
   - BMPs eligible for funding assistance are added to the program as technology is developed and their ability to treat NPS pollution is proven.
   - Cost-share available per practice and total per farm maximums are revised as warranted to address the expense of installing animal waste management systems.
   - Applicants are given the opportunity to increase the capacity of a practice or to install a less cost-effective BMP alternative provided that the applicant makes up any difference in the eligible cost.
   - MACS funding may be utilized in conjunction with federal USDA programs to co-cost-share on BMPs that are supported by both programs.
PROGRAM OVERVIEW

The MACS Program provides publicly supported grant funds to assist farm owners and authorized tenant farmers with the implementation costs of BMPs to control water quality problems on their property. Since its inception, implementation of the MACS Program has been the joint responsibility of MDA and the Maryland Department of Environment. Since 1996, MDA has been appropriated state bond money directly and assumed full responsibility for program administration at the State level.

The MACS Program is funded by both state and federal monies. Projects receiving cost-share from state bond funds must be approved by the State Board of Public Works. MACS projects may also be supported from federal and other grant funds. Grant funding is used for eligible projects and for agricultural practices that have shown effectiveness in reducing the potential for nitrogen and phosphorous delivery to waters of the State.

Over 41 different BMPs are eligible for MACS grants. Costs for installing BMPs vary depending on the area being protected, the scope of the problem, and local construction costs. Specific BMP cost-share percentages vary from 50 percent to a maximum of 100 percent of eligible project costs. The amount of grant support provided also depends on the cost-effectiveness of the proposed BMP when compared to other alternatives for that site.

The MACS office administers the grants, sets program guidelines, processes applications and claims, and provides compliance oversight. Through this process, MACS assures the technical integrity and eligibility of BMPs proposed for cost-share. The MACS program staff works with NRCS and local SCDs to conduct technical certifications and periodic inspections during the maintenance life of MACS projects.

The SCDs promote and administer the program locally. They assist participants in applying for cost-share and act as liaisons to assure that all information needed by MACS to process an application is provided. SCDs evaluate alternative NPS treatment options, recommend appropriate BMPs to solve water quality problems, design and supervise construction of the practices, and develop maintenance plans.
GENERAL ELIGIBILITY

The Maryland Agricultural Water Quality Cost-Share (MACS) Program was established to assist eligible applicants in implementing certain agricultural BMPs which address water quality impacts caused by nutrients, sediment, animal wastes, or agricultural chemicals. Under this program, grants are made to farmers for the primary purposes of conserving soil, protecting water resources and for protecting or restoring the environment for the public benefit.

The legislative intent in establishing the MACS Program was focused on dealing with the sources of agricultural NPS pollution. The Cost-Share law (8-702(a)) was based on the findings of the General Assembly that “...agriculturally related nonpoint sources of water pollution may potentially contribute to the degradation of the water resources of this state...” The law further states that the Program was created to “...assist in the implementation of agricultural practices which minimize water pollution from erosion, animal wastes, nutrients and agricultural chemicals.”

This makes clear that to be eligible for the MACS Program, practices must address and treat existing and potential NPS pollution related to agricultural sources. For purposes related to this discussion, MDA has interpreted “agricultural sources” to be from those land uses that include cropland (including horticulture), pasture or hay land, or areas on the farm devoted to raising livestock or poultry. MDA recognizes that it is common for other land uses (woodland or non-agricultural land) to contribute to the impacts of a NPS problem. While these other areas may be a consideration in designing certain practices, they cannot be the sole source of a NPS problem when determining eligibility. Agricultural land uses, as defined above, must be the significant contributing factor in establishing eligibility for the MACS Program.

The law, in defining practices, also makes it clear that the projects are to be located “...on a farm.” (8-701(f)). Simply stated, the practice under consideration must always be placed on the farm that contributes, at least in part, to the nonpoint source problem.

A third consideration might be the type of land use impacted prior to the installation of a practice, or the type of land use that would be impacted if the practice was not installed. It is MDA’s interpretation that as long as agricultural land uses, as defined above, were a contributing factor to a NPS problem, the type of land use impacted would not be a factor to consider in determining eligibility for MACS cost-sharing.
Applicant

An applicant may be an individual, partnership, corporation, trust, or other business enterprise where an owner, landlord, or tenant participates in the operation of a farm. Tenants may initiate a MACS application with the SCD, but an individual designated as the property owner as established by a deed must also sign the application prior to submitting it to MDA. All property owners must sign the cost-share Agreement before funds will be committed. SCD employees or supervisors are eligible to apply for cost-share assuming all eligibility criteria are met.

Eligibility

To be eligible for cost-share assistance, practices must address and treat existing and potential NPS pollution related to agricultural sources. Cropland (including horticulture), pasture or hay land, or areas on the farm devoted to raising livestock or poultry constitute land uses that are agricultural sources. Although it is common for other land uses (woodland or non-agricultural land) to contribute to the impacts of a NPS problem on a farm and these areas may influence BMP design, they cannot be the primary source of a NPS problem when determining eligibility.

Projects must be located on a farm. An eligible practice must always be placed on the farm that contributes, at least in part, to the NPS pollution problem. As long as agricultural land uses (as defined above) are the significant contributing factor to a NPS problem, the type of land use impacted is not a factor in determining eligibility. Where necessary, cropping history for three out of the five previous years may be requested.

Priority Areas

Priority areas have been defined as those watersheds determined to have a high potential to deliver nutrients to waters of the state (SECTION IV) and which have a critical condition. Priority areas may also exist outside of these watersheds provided a critical condition exists.

Critical Conditions

In determining the existence of critical conditions, evidence that surface or groundwater is carrying, or has the potential to carry, any pollutants from nutrients, sediment, animal waste, or agricultural chemicals to the waters of the state is required. In addition, the following criteria are considered in designating critical conditions:

- Whether the area has serious soil loss due to sheet, rill, gully, or wind erosion;
- Whether the area has severely eroded soils as designated by erosion symbol 3 in the county soil survey;
• Whether the area is designated as a land use capability class IIIe or greater, including all areas in class C slopes or greater, as designated by the county soil survey;
• Whether the area is included in a land use capability sub-class s, as designated by the county soil survey;
• Whether there is actual water pollution (moderate or severe); or
• Whether potential for water pollution exists.

Eligibility—Horse Operations

In addition to the eligibility requirements listed above, MACS grants may be available to certain horse operations using specific guidelines to assist with justifying agricultural nonpoint source pollution problems. While a specific license is not required to be eligible for funding, some operations will be required to have a license as described below. However, having a license does not assure funding eligibility.

Any horse operation that is required to have a license by the regulations (COMAR 15.16.01) of the Maryland Horse Industry Board must comply. If funding is granted, the license must be maintained for the life of the BMP. The following types of establishments must be licensed by the MHIB and may be eligible for cost-share funds:

• Boarding stables that house five or more horses and receive compensation for these services;
• Equine dealers and breeding stables which sell five or more horses each year;
• Horse riding and renting stables in which one or more horses are let for hire to be ridden or driven and instruction is not given; or
• Instruction establishments in which one or more horses are let for hire to be ridden or driven and for which instruction is given.

If establishments fitting the above definitions hold a livestock dealer's or livestock market license in lieu of a license from the MHIB, these operations may also apply for cost-share funding to address a critical condition on a farm. Establishments which are licensed by the MHIB but operate only as "auction houses" are not eligible. Eligibility of horse racing stables and farms, which are exempt from licensing by the MHIB, is determined on the basis of the following criteria:

• Whether the establishment stables five or more horses and receives compensation for these services;
• Whether the establishment sells five or more horses each year.

A horse operation that does not meet the criteria of any of the above organizations may still be eligible for funding. The operation must meet the general eligibility criteria of the proposed BMP including Nutrient Management cross compliance, Animal Unit criteria, and any other established MACS policies and procedures.
General Criteria

Applications for cost-share assistance are approved using the following criteria:

- A critical condition resulting from an agricultural activity exists. This is a condition on agricultural land where there is or there may be a high potential for the movement of nutrients, sediment, animal wastes or agricultural chemicals impacting waters of the State.
- The proposal must be in compliance with applicable BMP eligibility criteria (SECTION II).
- The most cost-effective BMP(s) are being proposed to solve the water quality problem or, after a cost-comparison of two or more eligible BMPs, funding provided is equivalent to cost-sharing on the most cost-effective BMP.
- The applicant (and/or operator) must meet the current Nutrient Management compliance guidelines (SECTION III, #30).
- The estimated soil loss calculations, associated cost per ton of soil saved is not greater than $55 per ton. Projects with total cost exceeding this per ton maximum may be financed up to the $55 per ton rate equivalent.
- The animal unit cost-eligibility criteria based on manure managed must be met (SECTION III, #5). Projects that do not meet the animal unit criteria may be prorated.
- The legally established per project and per farm cost-share limits in force at the time of application will not be exceeded.
- Sufficient unobligated funds are available.

An application may be disapproved for any of the following reasons:

- The application is incomplete or does not comply with the MACS regulations 15.01.05 (SECTION IV) or meet eligibility requirements.
- The applicant's land is not a farm or is not used for agricultural purposes.
- A critical condition does not exist on the farm.
- Cost-sharing funds are requested to re-establish an agricultural practice which has deteriorated due to the negligence or mismanagement of the applicant.
- The application is for a project that is already under construction.
- The applicant is not in good standing with the MACS program.
- Funds have been fully committed.
**Procedures**

The SCD works with a farmer to evaluate site conditions on a farm and recommends BMPs necessary to address farm management goals and water quality problems. If a technical determination is made that there is a likely potential for water quality impacts or if a water quality problem exists and can be corrected with a BMP eligible for cost-share support, the SCD works with the farmer to complete MACS application forms.

**Application**

Applications for cost-share grants are made on a designated MACS Program application form (SECTION III, #3). Sections I through III of the application are filled out by the applicant and the SCD together. The information provided includes identification of the applicant, a BMP description, the BMP(s) cost information based on the "flat rates" established by each SCD, and a technical determination and certification by the SCD that the BMP meets eligibility requirements. (SECTION III, #5) The SCD then forwards this information to MDA for review and processing.

Within 30 days of receipt of a complete application, MACS will notify the SCD if the application is eligible, indicate total estimated project cost, and the amount to be cost-shared by MACS. If the application is incomplete, MACS will contact the SCD to request any necessary information or clarification.

**Cost-Share Agreement**

Upon determination of preliminary eligibility of the application and notice by MDA, the SCD, applicant, and all landowners sign the MACS Agreement and return it within 30 days. MDA reviews the agreement for required signatures and then submits the project to the Board of Public Works (for State Bond Fund obligation) for funding approval. With funding approval, MDA executes the Agreement. This agreement obligates the applicant to the following:

- To establish, construct or install one or more BMPs consistent with the content of the application and in accordance with SCD technical specifications;
- To maintain the BMP in accordance with an operation and maintenance plan for its expected life span (ARTICLE II, F of Agreement);
- To use the BMP for its designed purpose;
- To alert MACS beforehand in writing of any change in the operation including, but not limited to, property transfers;
- To bind any successor in title for the life of the project as specified in the Agreement;
- To provide any required funds for the project;
- To grant MACS, if it requests, a security interest in any equipment, structures, or similar items purchased with State cost-sharing funds; and
- Any other requirements as specified in the signed Agreement.
Extensions

An approved practice must be completed within one year from the date the Agreement is executed. Agreement extensions must be obtained in advance if construction cannot be completed within one year. The MACS Program can allow only one extension of six months if there are clear, extenuating circumstances that prohibit project completion. To obtain an extension, the SCD Manager is to submit a request in writing, in advance of the agreement expiration, outlining the situation that has prevented completion, noting the stage of construction, and estimating the new target completion date. If the project is not completed within the six month extension period, the agreement will be cancelled. Both the applicant and SCD will receive notice of an Agreement cancellation.

Repairs

Financial assistance may be provided for repairs if a BMP previously installed with MACS support was damaged due to an unpredictable act of nature and not due to the applicant’s negligence or poor maintenance. A separate application must be submitted itemizing necessary repairs. The SCD must indicate the reason for the repair on the application form. The maintenance life of the original project will be restarted to coincide with the date of the claim for payment for the repair. If a repair is not completed within the indicated timeframe, additional MACS funding may be jeopardized.

Project Start-Up

Only after all parties execute the cost-sharing Agreement and the applicant receives final approval from MACS, shall an applicant begin the project. The applicant is responsible for all steps in completing the project, including but not limited to obtaining any necessary permits, materials, equipment, and services of contractors.
DISTRIBUTION OF COST-SHARE FUNDS

Once the project has been completed, a Claim for Payment form (SECTION III, #22) is completed by the applicant with assistance from the SCD. The SCD certifies that the project meets all applicable standards and specifications and that the applicant's Claim for Payment properly represents all eligible costs. MDA will distribute cost-sharing funds only after it has received this confirmation from the SCD.

- Prior to submitting a Claim for Payment, the applicant is responsible for providing documentation of all eligible costs on an itemized statement and submitting it to the SCD for approval.
- Each itemized cost must be supported by paid receipts or unpaid invoices.
- Each receipt must be signed by the applicant and include a statement certifying that each cost is true and correct to the best of their knowledge.
- Each payment receipt or unpaid invoice must show:
  - Vendor(s) name and address
  - Type of materials, labor, or equipment used on the project
  - The unit cost paid for the item
  - The total amount paid to the vendor
  - The date payment was made
  - If receipts include items that were not used on the approved project, a person shall cross through, but leave legible, those items and adjust any total on the receipt.

Payment will be made based on the following guidelines:

- If actual costs are less than the estimated costs contained in the Agreement, the payment will be based on the actual costs.
- If actual costs are greater than the estimated costs contained in the Agreement, payment may be made upon written justification of the project overrun by the SCD Manager to the MACS office along with submitting the Claim for Payment. (Compensation for overruns may be delayed if they require an additional approval by the Board of Public Works)
- If itemized costs differ from the approved flat rate, the payment will be based on the flat rate or actual cost, whichever is less.
- MACS will not provide payment for eligible expenses that have been reimbursed by NRCS. The MACS Program only supports up to 87.5% of eligible costs taking into account payments from all public funding sources.
Cost-Share Funding Limits

MDA may provide cost-share funds of up to 87.5 percent of eligible costs for an eligible project. Sediment Control Ponds are an exception and are cost-shared at a maximum rate of 65 percent (SECTION II-Code 378).

Funding limits relate to each farm. One person may own more than one farm, and the number of farms is established according to the number of deeds held. One deed is equal to one farm. If a farm changes ownership, then the “per farm” funding thresholds would start anew regardless of the level of MACS assistance obtained by the previous owner, subject to review and approval of the MACS office.

- Cost-sharing for a single project, excluding animal waste treatment and containment, may not exceed $50,000.
- The cumulative maximum MACS payments for multiple projects (active), other than animal waste treatment and containment, may not exceed $150,000 per farm.
- The payment made under this program for one animal waste storage or treatment project may not exceed $200,000.
- For all animal waste treatment and containment projects (Practice Codes 313, 316, and 359) on a farm, the cumulative payments may not exceed $300,000.
- If an animal waste treatment and containment project is constructed under a pooling agreement, the payment may not exceed $200,000.
- The payment for a single project (other than Practice Codes 313, 316, and 359) covered by a pooling agreement may not exceed $150,000.

Method of Payment

Payment is usually made by check directly to the applicant, but may be made to an additional payee (a vendor, contractor, or lending institution) if requested during the Application or Agreement process. A request is made using the MACS Authorization for Additional Payee Form. (SECTION V, #4)

Direct deposit of payment may also be requested by filling out the State of Maryland, Comptroller of Maryland, Vendor Electronic Funds Transfer (EFT) Registration Request Form. (SECTION V, #3) All future State of Maryland payments will be direct deposited unless a new form is submitted discontinuing electronic transfers. If the applicant is a State employee, the payment will automatically be by direct deposit.
PROJECT MONITORING BY SOIL CONSERVATION DISTRICTS

The SCD periodically inspects the construction or installation of MACS projects to ensure compliance with technical specifications and MACS Program guidelines and continued maintenance of the BMP. MACS agreements allow SCD staff reasonable access to the project site for inspections and review of the applicant's project records.

If a person fails to establish, install, construct, or maintain a BMP in accordance with any Agreement executed with MDA, that person shall be liable for the full amount of State cost-sharing funds paid for any practice that was not installed or properly maintained.

The SCD or MDA may monitor projects to determine whether they are being maintained in accordance with the maintenance Agreement. Any violation shall be reported by the SCD to MACS (COMAR 15.01.05.11). The SCD maintains a complete record of technical assistance provided to participants and these records are made available to MDA if requested.

Farm operations are required to be in compliance with applicable Maryland Nutrient Management Regulations at all times. (SECTION III, #29 and #30) Applicants are required to keep their Waste Management System Plan and Nutrient Management Plan updated and current throughout the maintenance life of any animal waste treatment or containment project. These updates are the responsibility of the applicant and landowner, and the SCD may provide assistance.

On an annual basis, SCDs inspect up to 10 percent of all BMPs installed in their SCD with MACS Program assistance. Projects that receive these on-farm status reviews are randomly selected by MDA and are representative of the different types of BMPs installed in a county.

The SCD completes an On-Farm Status Review form (SECTION V, #5) for each of the randomly selected projects. The MACS program is responsible for formally notifying the farmer if a BMP is found to be out of compliance. The SCD will provide technical assistance to the farmer after the status review to correct any problems and bring the project back into compliance by a certain date.

Participants in MACS programs are not liable for damage or destruction of a best management practice if caused by an act of nature that could not be reasonably anticipated. MACS funding may be available to assist with repairs after a natural disaster.
TRANSFER OF PROPERTY GUIDELINES

If an applicant plans to sell land that contains a MACS BMP still within its contract maintenance life, the Department and the SCD must be notified beforehand in writing. In an endeavor to promote good conservation, farmers are required to transfer such a MACS Agreement to the new owner. An Agreement is not eligible for transfer until the farmer requests the local SCD to complete and submit an On-Farm Status Review for all BMPs constructed under the Agreement. The seller should disclose all MACS BMPs that are still under an Agreement and located on the land being sold to the potential buyer.

Upon sale of the property, the MACS Agreement is transferred to the new owner who is then responsible for on-going upkeep during the required maintenance life of the practice. Failure to transfer the Agreement leaves the original owner/applicant responsible for reimbursing MACS if the new owner fails to take responsibility to maintain the BMP. Many BMPs will be transferred automatically because of current recordation requirements.

Transfer / Repayment Schedule

If a MACS Agreement is not transferred to the new landowner within a reasonable timeframe, MDA may pursue legal action against the original landowner (applicant) to secure repayment of State cost-share funds using the following procedure:

1) 0-30 days – When an Agreement is in default for no more than 30 days, a pro-rated repayment option is available. This option provides credit for the time the Agreement was in compliance.

2) 31-90 days - When an Agreement is in default for more than 30 days but less than 91 days, a repayment of the full amount of the original grant is required.

3) 91 days or more – When an Agreement is in default more than 90 days, enforced collection will be initiated by MDA. Enforced collection is the legal pursuit by the State to secure the repayment of the full amount of the original grant and an additional 17% collection fee. Enforced collection may adversely affect the applicant’s credit rating and their ability to access other State programs and services.

Policies

- Agreement Transfers and Partial Agreement Transfers are not allowed for individual BMPs or any multiple BMPs working as a unit when the BMPs are either totally or partially located on land that has been sold and the land treated by the BMP will no longer be utilized primarily for agricultural production.

- Partial Agreement Transfers are not available for BMPs contained within a single Agreement when an individual BMP or any multiple BMPs working as a unit cannot be transferred in their entirety to only one of the new landowners.
The original applicant will be held responsible for the repayment of the MACS grant when property is sold that contains BMPs within MACS agreement maintenance life that are ineligible for either full or partial Agreement Transfers, the new landowners are not legally obligated (by recordation) for maintenance of the BMP or the new owners are unwilling to accept an available Agreement Transfer, the original applicant will be held responsible for the repayment of the MACS grant.

Partial Agreement Transfers are allowed when individual BMPs, or any multiple BMPs working as a unit are located in their entirety on only one of the new landowners’ property and the new owners’ land continues to be utilized primarily for agricultural production.

An exception to the rules for Partial Agreement Transfers is allowed for an intra-family partial conveyance of an original farm parcel subject to a MACS Agreement. Partial Agreement Transfers, written in the form of a “Pooling Agreement” will be allowed for BMPs contained within a single Agreement when an individual BMP or any multiple BMPs working as a unit cannot be transferred in their entirety to only one of the new landowners.

An “intra-family sale” is defined as a land transfer between current owners, spouses (currently married, separated or divorced), parents of the owners, children of the owners (natural, adopted, step), and/or grandchildren of the owners (natural, adopted, step).
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