Home > Environmental Programs > Water Programs > Wetlands and Waterways > Regulations > Mitigation

About Wetlands
About Floodplains and Waterways
Permits and Applications
Documents and Information
Regulations
MD Wetland Conservation Plan
Program Contacts
Wetlands and Waterways Home

Info Centers for:
Citizens
Business
Research

To MDE Homepage

Mitigation

- What is mitigation? When is mitigation required?
- What are the procedures for mitigation?
- What are the acreage requirements for mitigation?
- Maryland Nontidal Wetland Mitigation Guidance (being revised)
  A comprehensive guide to the regulations, procedures and information sources relevant to wetlands mitigation.
- Citizen's Guide to Nontidal Wetland Mitigation Monitoring: Methods Manual
  A methods manual on how to quantitatively monitor created/restored/enhanced wetland performance as a natural wetland, and how natural selection is progressing.
- Prioritizing areas for wetland restoration, preservation, and mitigation
  Two ongoing projects to prioritize areas, one focusing on Maryland's Coastal Bays and the other focusing on all of Maryland.

For more information, please contact:
Wetlands & Waterways Program, MDE
1800 Washington Blvd.
Baltimore, MD 21230 1-800-633-6101
funded from EPA grant CD983039-01-0

What is Mitigation?

Nontidal wetland mitigation is the creation, restoration, or enhancement of nontidal wetlands, to compensate for nontidal wetlands that were or will be lost due to regulated activities or non-exempt agricultural activities. The State definition of wetlands corresponds to the Federal definition of compensatory mitigation.

Nontidal wetland **creation** projects establish nontidal wetlands on upland sites. These projects usually involve lowering the elevations of uplands by grading the soil for the purpose of increasing the frequency of soil saturation, flooding, and ponding.

Nontidal wetland **restoration** projects reestablish nontidal wetlands on sites where they were formerly located. For example, the removal of drainage structures from agricultural fields can result in nontidal wetland restoration.

Nontidal wetland **enhancement** projects provide additional protection to, or improve the functions of existing nontidal wetlands. Planting wetlands that are farmed or dominated by lawn grass is the most common type of enhancement project. Stream restoration projects, such as stabilizing the banks or restoring the natural meander pattern to a channelized stream, are examples of projects that can enhance existing nontidal wetlands. Enhancement projects do not, however, increase the acreage of nontidal wetlands.

Back to top

When is Mitigation Required?

Mitigation is required to compensate for authorized activities which will cause unavoidable losses of nontidal wetlands.

What Activities Require Mitigation?

Regulations Quick Links

- Online Regulations
- Wetland Regulation Database
- Permit Information
- Mitigation
- Restoration, Mitigation, and Preservation
- Prioritizing Areas for Restoration, Preservation, and Mitigation

- Removal, excavation, or dredging of soil, sand, gravel, minerals, organic matter, or materials of any kind.
- Changing existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics.
- Disturbance of the water level or water table by drainage, impoundment, or other means.
- Dumping, discharging of material, or filling with material, including the driving of piles and placing of obstructions.
- Grading or removal of plant life that would alter the character of a nontidal wetland.
- Agricultural activities in undisturbed wetlands.

What Activities do not Require Mitigation?

- Forestry activities
- Traditional agricultural activities such as plowing and cultivating, which do not drain, dredge, fill, or otherwise convert undisturbed nontidal wetlands.
- Development activities with minimal impacts to nontidal wetlands, and which are exempt or qualify for a Letter of Authorization, except Letters of Authorization for activities in the Chesapeake Bay Critical Area.
- Mitigation is not required for temporary impacts to wetlands or impacts to the wetland buffer or expanded buffer.

What are the Procedures for Mitigation?

Development Activities | Agricultural Activities | Mining Activities

Mitigation for Development Activities

- Determine the acreage of each type of wetland to be impacted, based on delineation consistent with the Corps of Engineers Delineation Manual.
- Determine whether a mitigation project or payment into the MDE Nontidal Wetlands Compensation Fund (FUND) will be proposed.
- Locate appropriate mitigation site(s).
- Develop a Phase I Mitigation Plan to meet mitigation goals.
- Submit Phase I of the Mitigation Plan or a proposal to use the Fund to MDE as part of the application.
- MDE will render a decision on the Phase I Plan (within 60 days or within 45 days of a public hearing).
- MDE may require modifications to the Phase I Plan as part of the final permit decision.
- If the project is not exempt from mitigation requirements, the following mitigation steps must be performed, and will be required as permit conditions:
- After the Phase I Mitigation Plan has been approved, develop a Phase II (design) Mitigation Plan. Guidance on the required contents of Phase II will be part of the final permit decision.
- Submit Phase II of the Mitigation Plan to the Department within 3 months of receiving a favorable permit decision.
- The Department will render a decision within 45 days of receipt of a completed Phase II Mitigation Plan (unless a final permit decision has not been made).
- Demonstrate that you have the right to use the site for mitigation.
- If necessary, change the Mitigation Plan based on comments by the Department.
- If necessary, obtain a mitigation surety bond (see page 30). The mitigation surety bond will be returned after the construction phase of the mitigation project.
- Create, restore, and/or enhance nontidal wetlands at the mitigation site(s).
- Demonstrate that the site has been protected in perpetuity (see page 35) and that the Department has a right of entry to the site at any time.
- Monitor the success of the mitigation project for 5 years (or other time periods as agreed to with the Department) (see Appendix F).
- Submit annual monitoring reports.
- Conduct maintenance activities.
- Modify the mitigation design to insure success.

Back to top

Mitigation for Agricultural Activities

For agricultural activities that are conducted in nontidal wetlands and that require a Soil Conservation and Water Quality Plan, a farmer must:

- Contact the Soil Conservation District (SCD) to identify or verify the extent of nontidal wetlands before beginning agricultural activities in nontidal wetlands.
- Submit a Soil Conservation and Water Quality Plan with best management practices (see below) to the SCD for approval.
- Submit the mitigation components of the Soil Conservation and Water Quality Plan to the Department. Within 60 days of receipt, the Department will determine whether or not the mitigation component is consistent with the regulations.
- Submit the State-approved mitigation component of the Soil Conservation and Water Quality Plan to the SCD.
- Receive SCD approval of a Soil Conservation and Water Quality Plan that is consistent with the mitigation requirements.
- If necessary, obtain a mitigation surety bond (see page 30). The mitigation surety bond will be returned after the construction phase of the mitigation project.
- Create, restore, and/or enhance nontidal wetlands at the mitigation site(s).
- Demonstrate that you have the right to use the site for mitigation, that the site has been protected in perpetuity (see page 35), and that the Department has a right of entry to the site at any time.
- Monitor the success of the mitigation project for 5 years (or other time periods as agreed to with the Department) (see Appendix F).
- Submit annual monitoring reports.
- Conduct maintenance activities.
- Modify the mitigation design to insure success.
- Best management practices (BMPs) are conservation measures that control soil loss, reduce water quality degradation, and/or minimize adverse impacts to water quality and flow, and the chemical, physical, and biological characteristics of nontidal wetlands. Examples of BMPs include filter strips, field borders, conservation cropping sequences, nutrient and pesticide management, and irrigation water management.

Mitigation for Surface and Strip Mining Activities

If mitigation will be required for a mining activity, a Phase I (conceptual) Mitigation Plan must be developed.

- Determine the acreage of each type of wetland (forested, scrub-shrub, and/or emergent) to be impacted, based on a delineation consistent with the "Corps of Engineers Wetlands Delineation Manual".
- Locate an appropriate mitigation site (see page 12).
- Develop a wetlands mitigation component of the mining reclamation plan to meet the mitigation goals (see page 11).
- Submit the wetlands mitigation component of the mining reclamation plan to the Department with the applications for a Permit to Surface Mine and/or a Nontidal Wetlands and Waterways Permit.
- Within 45 days of receipt of a completed Mitigation Plan, the Department will render a decision on the mitigation component of the mining reclamation plan (unless a final permit decision has not been made).
- The Department may require modifications to the mitigation component of the mining reclamation plan as part of the final permit decision.
- If the project is not exempt from mitigation requirements, the following mitigation steps must be performed, and will be required as permit conditions:
- If necessary, change the mitigation component of the mining reclamation plan to meet comments by the Department.
- If necessary, obtain a mitigation surety bond (see page 30). The mitigation surety bond will be returned after the construction phase of the mitigation project. This bond will be in addition to the mining bond.
- After mining is completed in the area to be used for the mitigation (if onsite), create, restore, and/or enhance nontidal wetlands at the mitigation site(s).
- Demonstrate that you have the right to use the site for mitigation, that the site has been protected in perpetuity (see page 35), and that the Department has a right of entry to the site at any time.
- Monitor the success of the mitigation project for 5 years (or other time periods as agreed to with the Department) (see Appendix F).
- Submit annual monitoring reports.
- Conduct maintenance activities.
- Modify the mitigation design to insure success.

Back to top

What are the acreage requirements for Mitigation?

Acreage replacement ratios are used to determine the amount of mitigation required. Before any nontidal wetlands have been impacted by a project, the amount of each type of wetland to be lost (forested, scrub-shrub, and/or emergent) must be determined. Acreage replacement ratios are expressed as a relationship between two numbers. The first number specifies the acreage to be mitigated and the second number specifies the acreage of nontidal wetlands impacted. The acreage replacement ratios are:

WETLAND TYPE	REPLACEMENT RATIO
Emergent	1:1
Emergent, using a bank	1.5:1
Farmed	1:1
Farmed, using a bank	1.5:1
Scrub-shrub to emergent conversion	1:1
Scrub-shrub to emergent conversion, using a bank	1.5:1
Forested to emergent conversion	1:1
Forested to emergent conversion, using a bank	1.5:1
Forested to scrub-shrub conversion	1:1*
Scrub-shrub	2:1
Scrub-shrub, using a bank	3:1
Forested	2:1
Forested, using a bank	3:1
Emergent (of special State concern)	2:1
Emergent (of special state concern), using a bank	3:1
Scrub-shrub (of special State concern)	3:1
Scrub-shrub (of special State concern), bank	4.5:1
Forested (of special State concern)	3:1
Forested, (of special state concern), using a bank	4.5:1
* Some conversions of forested wetlands to scrub-shrub require mitigation.	

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Back to top

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