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DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION

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SUBJECT: Guidance Memo No. 09-2004 - Applying Compensatory Mitigation Preferences Provided in the EPA Mitigation Rule to Virginia Water Protection Permitting

TO: Regional Directors

FROM: Ellen Gilinsky



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COPIES: VWP Permit Managers, David Davis

Summary:

The purpose of this guidance is to define how the Department of Environmental Quality (DEQ) Virginia Water Protection Permit (VWPP) Program will provide support for the 2008 Compensatory Mitigation Rule¹ (Rule) issued by the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE). This guidance outlines how VWPP staff will support the Rule when reviewing and accepting compensatory mitigation packages until the VWPP regulation can be revised to conform to the Rule. The intent of this guidance is to reduce regulatory burden and to eliminate contradictory or duplicative compensation requirements between state and federal wetland regulatory programs. VWPP supports the Rule and concurs with the preference hierarchy presented in the Rule. VWPP staff should facilitate conformity to the Rule when reviewing compensatory mitigation proposals. When documenting the project file, VWPP staff should cite this guidance and the Rule as an applicant's justification for following the Rule's preference hierarchy.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET and for the general public on DEQ's website at: <http://www.deq.virginia.gov>.

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Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

¹ "Compensatory Mitigation for Losses of Aquatic Resources". [73 Fed. Reg. 19594](http://www.epa.gov/wetlandsmitigation/#plan) (April 10, 2008) (codified at 33 CFR Parts 325 and 332 and 40 CFR Part 230 (<http://www.epa.gov/wetlandsmitigation/#plan>))

I. Purpose

The purpose of this guidance is to reduce regulatory burden and to eliminate contradictory or duplicative compensation requirements between Virginia Water Protection Permit (VWPP) Program and U.S. Army Corps of Engineers (USACE) resulting from the 2008 Mitigation Rule (Rule). This guidance provides VWPP staff instructions for following the Rule and explains situations under which VWPP staff may differ from the Rule.

II. Background and Authority

Compensatory mitigation is a tool for achieving no net loss of wetland acreage and function and no net loss of stream function after authorized impacts to surface waters have been avoided and minimized through the planning and permitting process.

A. Authority of the 2008 Mitigation Rule

On April 10, 2008, EPA and USACE issued the Rule, which outlines federal standards for compensatory mitigation packages for impacts to surface waters authorized under Section 404 of the Clean Water Act. The Rule gives preference first to mitigation banks, second to in-lieu funds, and third to permittee-responsible mitigation as compensatory mitigation for minor impacts to aquatic resources, and provides scientific support for the sequence.

The Rule emphasizes a watershed approach to compensatory mitigation and presents the following “preference hierarchy” for compensatory mitigation:

- First:* Mitigation bank credits (purchased from an approved bank that services the impact area)
- Second:* In-lieu fee fund program credits
- Third:* Permittee-responsible mitigation (watershed approach as explained later in this guidance)
- Fourth:* Permittee-responsible mitigation (onsite and in-kind mitigation) with consideration for its compatibility with the proposed project
- Fifth:* Permittee-responsible mitigation (off-site and/or out-of-kind).

The preference hierarchy was designed to improve the effectiveness of compensatory mitigation at replacing lost aquatic resource functions and acreage, and is based on a large body of science demonstrating that the typical large-scale mitigation project is more efficient and effective than multiple smaller mitigation projects. The Final Environmental Assessment² reiterates research findings from numerous studies, which conclude mitigation banks and in-lieu fee fund programs

² http://www.epa.gov/owow/wetlands/pdf/MitRule_Regulatory_Analysis.pdf

are the most successful modes for mitigating impacts to aquatic resources. The Final Environmental Assessment provides conclusions such as the following:

1. Replacement wetlands are often sited in unsuitable locations under a system that prefers on-site mitigation.³
2. Mitigation banks and in-lieu fee programs have advantages toward achieving the goal of no net loss of wetlands.⁴
3. Mitigation banks provide economy of scale and better ecological performance, which benefits the aquatic environment.⁵
4. Mitigation banks provide ecological benefits in advance of impacts.⁵

Where state and local regulations differ from the Rule's preference hierarchy, the Rule provides flexibility. The supplementary information to the Rule in the Federal Register states: "*If permittee-responsible mitigation is required by a state or local government with regulatory authorities that are similar to the Corps under section 404 of the Clean Water Act or sections 9 or 10 of the Rivers and Harbors Act of 1899, and the mitigation project will appropriately offset the permitted impacts, then the district engineer may determine that the permittee-responsible mitigation is acceptable for the purposes of the DA [Department of Army] permit.*"

B. Authority of VWPP Program

State Water Control Law ([§62.1-44.15 et seq.](#)) and the VWPP Program Regulation ([9 VAC 25-210 et seq.](#)) require that VWPP permittees compensate for surface water impacts, including wetland impacts. The overarching objective of compensatory mitigation, as stated in the VWPP Program Regulation (9 VAC 25-210-116(A)), is to meet "*no net loss...sufficient to achieve no net loss of existing wetland acreage and no net loss of functions in all surface waters.*" The Regulation (9 VAC 25-210-116(C)(1)) refers to on-site, in-kind compensation as ecologically preferable in most cases. However, the Regulation further recognizes that there are cases when off-site mitigation is ecologically preferable and practicable to on-site mitigation and allows off-site or out-of-kind compensation when it is justified through analysis (9 VAC 25-210-116 (B) (1-2)).

Under the Code of Virginia ([§ 62.1-44.15:23](#)) and the VWPP Regulation 9 VAC 25-210-116(D)-(F), any mitigation approved by VWPP must be ecologically preferable among proposed mitigation options; provide continuing accountability to VWPP and the public; and demonstrate successful replacement of resource functions provided by surface waters.

³ Michigan Department of Environmental Quality (Michigan DEQ). 2001. Michigan Wetland Mitigation and Permit Compliance Study: Final Report. Michigan Department of Environmental Quality, Land and Water Management Division. Lansing, Michigan. 59 pp. plus appendices.

⁴ National Research Council (NRC). 2001. Compensating for Wetland Losses Under the Clean Water Act. National Academy Press (Washington, DC).

⁵ Federal Register. 1995. Federal Guidance for the Establishment, Use and Operation of Mitigation Banks; Notice. Department of Defense, Environmental Protection Agency, Department of Agriculture, Department of the Interior, Department of Commerce, November 28, 1995. Volume 60, No. 228, pp. 58605-58614.

The VWPP Program Regulation (9 VAC 25-210-116(B)) requires an applicant proposing off-site or out-of-kind mitigation, rather than on-site/in-kind mitigation, to compare the impacted site and replacement site. The Regulation provides criteria for the comparison as follows: “*water quality benefits; acreage of impacts; distance from impacts; hydrologic source and regime; watershed; functions and values; vegetation type; soils; constructability; timing of compensation versus impact; property acquisition; and cost.*” The Regulation further states, “*The analysis shall compare the ability of each compensatory mitigation option to replace lost wetland acreage and functions or lost stream functions and water quality benefits.*”

III. Definitions

The definitions in [9 VAC 25-210-10](#) of the VWPP Program Regulation apply to this guidance. For the purposes of this guidance, the term “**approved mitigation bank**” means a site providing off-site, consolidated compensatory mitigation that is developed and approved in accordance with all applicable federal and state laws, regulations, and guidance for the establishment, use and operation of mitigation banks, and is operating under a signed banking agreement. In contrast, a “**proposed mitigation bank**” means a site under consideration for providing off-site, consolidated compensatory mitigation, but which has not been approved in accordance with federal and state laws, regulations, and guidance.

Definitions pertinent to this guidance from the Rule include the following:

Functions: the physical, chemical, and biological processes that occur in ecosystems ([33 CFR 332.2](#)).

Permittee-responsible mitigation: an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility (33 CFR 332.2).

Services: the benefits that human populations receive from functions that occur in ecosystems (33 CFR 332.2).

Temporal loss: the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss (adapted from 33 CFR 332.2).

Watershed: a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean (33 CFR 332.2).

Watershed approach: an analytical process for making compensatory mitigation decisions that support the sustainability or improvement of aquatic resources in a watershed. It involves consideration of watershed needs, and how locations and types of compensatory mitigation projects address those needs. A landscape perspective is used to identify the types and locations of compensatory mitigation projects that will benefit the watershed and offset losses of aquatic resource functions and services caused by surface water impacts. The watershed approach may involve consideration of landscape scale, historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources when determining compensatory mitigation requirements (33 CFR 332.2).

Watershed plan: a plan developed by federal, tribal, state, and/ or local government agencies or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans (33 CFR 332.2).

IV. EPA Mitigation Rule and Justification for following the Rule under VWPP

VWPP staff should follow the Rule when reviewing compensatory mitigation packages and, in the application or permit file, cite the justification presented in this guidance and the Rule as an applicant's justification for following the Rule's preference hierarchy. The fact sheet or summary sheet in the permit file should state, "The compensation package conforms with the preference hierarchy of the Rule and GM09-2004."

A. Mitigation Banks.

The Code of Virginia (see § [62.1-44.15:23](#)) allows the purchase of bank credits only in the same or adjacent watershed⁶ as the proposed surface water impact, which is consistent with the intent of the Rule and the VWPP Regulation. VWPP staff may assert a preference for approved mitigation banks as compensatory mitigation based on the following justification:

1. Mitigation Banking Instruments (MBI) require thorough planning and monitoring of mitigation.
2. The Interagency Review Team (IRT) only releases credits from banks when the IRT agrees that the surface water mitigation is meeting certain success criteria or when plans for a successful mitigation bank have been approved.⁷

⁶ Defined in the Hydrologic Unit Map of the United States, U.S.G.S. 1980, except for parts of the Tidewater area. See DEQ [Guidance Memorandum 02-2012](#) "Determination of Service Areas for Compensatory Mitigation Banks."

⁷ The Interagency Review Team (or IRT) is an interagency group of federal, state, tribal, and/or local regulatory and resource agency representatives which participate in the development of a Banking instrument and oversee the establishment, use, and operation of a Mitigation Bank with the Corps and DEQ serving as Chair(s). For tidal wetland Mitigation Banks, the Corps and VMRC will serve as Co-Chairs.

3. DEQ recognizes the benefits of having mitigation in place before impacts are initiated, which is more often the case with mitigation banks than with permittee-responsible mitigation.
4. Current science shows that consolidated mitigation is ecologically preferable and fits a watershed approach as compared to permittee-responsible mitigation.

In accordance with 9 VAC 25-210-80 *Application for a VWPP permit*, a permit application can be deemed complete and then processed only if, for projects involving compensation through an approved mitigation bank, the applicant provides certification from the bank owner of the availability of credits. Therefore, a compensation plan using a proposed mitigation bank can not be considered, because no credits are available from the bank at the time of application.

B. In-Lieu Fee Funds.

When mitigation banking opportunities are not available or ecologically preferable, VWPP staff may assert a preference for in-lieu fee compensation over permittee-responsible options because:

1. In-lieu fee projects may involve larger, more ecologically valuable compensatory mitigation projects, which are performed more systematically as compared to permittee-responsible mitigation.
2. The Rule revises and improves the requirements for in-lieu fee programs, which will ultimately require equivalency with the standards imposed on mitigation banks and permittee-responsible mitigation.

There are currently two in-lieu fee funds operating in the Commonwealth of Virginia; the Virginia Aquatic Resource Trust Fund (VARTF) and the Elizabeth River Fund.⁸ Both funds must revise their Trust Fund Instrument by July 9, 2010 to be in compliance with the Rule. DEQ is working with the USACE and VARTF to establish a credit system to meet the 2010 deadline. Until such time as VARTF reduces the backlog of project credits in certain basins, VWPP staff should accept in-lieu fee fund compensation on a case by case basis.

C. Permittee-Responsible Mitigation.

VWPP staff may give consideration to permittee-responsible (watershed approach first, on-site/in-kind second, and off-site/out-of-kind third) compensation when a mitigation bank and an in-lieu-fee fund are not the ecologically preferable option. Such circumstances may include the following:

1. Some areas of the Commonwealth lack mitigation bank and in-lieu fee fund options.
2. Certain watersheds or project sites may present particularly preferable restoration, enhancement, creation or preservation opportunities. For example, the watershed may exhibit opportunities for restoring threatened and endangered species habitat, the project site may provide opportunities for stream restoration important to the overall watershed ecology,

⁸ Additional information regarding the Virginia Aquatic Resources Trust Fund and the Elizabeth River Restoration Trust may be found at the Department of Environmental Quality website.
<http://www.deq.virginia.gov/wetlands/mitigate.html>.

or the project site may provide the only opportunity for in-kind compensation of unique aquatic resources such as bogs, streams, and sinkholes. Permittee-responsible compensation may provide a unique opportunity for preservation of an exemplary aquatic system. Exemplary aquatic systems meet the criteria provided in “Use of Preservation for Compensatory Mitigation in VWPP Permits”.⁹

The Rule allows permittee-responsible off-site or out-of-kind compensatory mitigation when it is the most ecologically preferable option. For example, off-site compensation is often preferable where: 1) mitigation bank and in-lieu fee fund options are not available, 2) in-kind compensation is only available off-site, 3) there are no true onsite opportunities for compensatory mitigation, **and simultaneously** 4) there is not sufficient documentation to identify whether or not the compensation meets a watershed approach. The Virginia Off-Site Mitigation Guidelines¹⁰ (Guidelines) were jointly published by the USACE, DEQ, Department of Game and Inland Fisheries (DGIF), and United States Fish and Wildlife Service (USFWS) through a public notice on March 5, 2008. The Guidelines provide detailed criteria for selecting appropriate locations for off-site compensatory mitigation.

The Rule’s preference hierarchy would still allow a combination of bank credits and on-site mitigation. Purchase of bank credits would compensate for lost wetland acreage or stream function, while the on-site mitigation would maintain on-site resource function.

VWPP staff may allow mitigation that differs from the Rule’s preference hierarchy in instances when large projects provide opportunities for onsite/in-kind where the compensation site is near or in an impaired watershed¹¹ and the compensation addresses the impairment. Please refer to Section II in this guidance regarding flexibility where permittee-responsible mitigation is required by state or local government.

V. Documenting the Ecologically Preferable Proposal

VWPP staff will follow the Rule’s preference hierarchy unless unique circumstances at the impact site provide an ecologically preferable offset of impacts (e.g. when there are unique aquatic resources on site). In these cases, VWPP staff should coordinate with the appropriate USACE representative to overcome any differing agency objectives and accept a unified compensatory mitigation package.

Section IV of this guidance reiterates recent science, which finds mitigation banks and in-lieu fee funds to be ecologically preferable. The VWPP Regulation (9 VAC 25-210-10) defines ecologically preferable options as having a higher potential to replace, “*existing wetland or stream functions and values, water quality and fish and wildlife resources than alternate proposals.*” Section IV of this guidance presents a framework for determining the most ecologically preferable compensatory mitigation option under the VWPP Program. Applicants

⁹ See Guidance Memorandum 08-2009 “[Use of Preservation for Compensatory Mitigation in VWPP Permits](#)”.

¹⁰ See <http://www.deq.virginia.gov/wetlands/mitigate.html> for a full version of the “Off-site Mitigation Guidelines”.

¹¹ Impaired watersheds and streams are presented on the 303(d) list of impaired streams, see <http://www.deq.virginia.gov/wqa/305b2004.html>

should cite this guidance and the Rule to document the ecological preferability (see 9 VAC 25-210-116) of a compensation proposal.

Justification for differing from the preference hierarchy presented in this guidance may be provided through a comparison of the impact site and compensation site(s), as described by 9 VAC 25-210-116(B). An example where an analysis is needed is when interested parties (VWPP staff and other state resource agency staff, USACE and other federal resource agency staff, or the property owner) disagree on the ecological preferability of a particular compensation option.

VI. Watershed Approach

The Rule states: “*In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services*”.¹² Under the watershed approach, the required compensatory mitigation can be split up into an on-site and off-site component as explained in [33 CFR 332.3\(c\)\(2\)\(iii\)](#). For example: requiring on-site mitigation to enhance water quality functions while also requiring off-site mitigation to replace lost habitat functions.

A watershed approach can be employed whether or not a watershed plan is available. The watershed approach may apply to projects where any of the following are applicable:

1. The applicant has provided sufficient information for VWPP and the USACE to evaluate the project from a watershed scale.
2. Watershed planning by the locality has identified water quality restoration and preservation priorities.
3. The proposed compensation meets the needs of a watershed plan developed by government agencies and/or non-profit resource planners, in consultation with stake-holders.

Although the VWPP program has not used the term “watershed approach” in regulation, the VWPP program has historically used watershed approach concepts in practice. VWPP staff should continue to support a watershed approach, but should follow the preference hierarchy for the reasons presented in Section IV of this guidance memorandum.

The watershed approach under the Rule requires a structured consideration of watershed needs and how wetlands and other types of aquatic resources in specific locations will address those needs (preamble, FR page 19630). The Rule describes what is needed for a sufficient watershed plan in §332.3(c)(2)(i)-(v). It describes the information needed to use a watershed approach in the absence of a watershed plan in §332.3(c)(3)(i)-(iii). The Rule gives USACE staff the authority to determine if a watershed plan is appropriate.

¹² [73 Fed. Reg. 19673 \(April 10, 2008\)](#)

When an applicant proposes permittee-responsible mitigation using a watershed approach, VWPP staff should consider whether a watershed approach is applicable. Factors to consider include but are not limited to:

1. Is there adequate information currently available on watershed conditions and needs?
 - a. If there is a watershed plan, is it appropriate for wetland mitigation planning or is it ideally used for some other purpose such as stormwater planning?
 - b. Is this in an area where watershed boundaries are unclear or do not exist (e.g. coastal areas) and therefore a watershed approach is not relevant?
 - c. Does the watershed approach account for geographic ecosystem type even within the watershed? For example, it should require impacts in coastal, non-tidal waters to be compensated for in coastal, non-tidal waters.
2. Do in-house resources (e.g. mapping, threatened and endangered species databases, aerial photographs) provide additional watershed or site-specific data? For example, where an impact site has Mabee's salamander (a state-listed threatened species) habitat and an applicant proposes in-kind/off-site mitigation within the watershed where the compensation site provides Mabee's salamander habitat, the off-site mitigation option can be given preference.
3. Is the scope of analysis adequate? The scope of analysis should be commensurate with the level of impact. When determining the scale of the watershed analysis, staff should consider factors such as aquatic habitat diversity, habitat connectivity, relationships to hydrological sources (including availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses.

VIII. Conclusion

The VWPP Regulation and the Rule share the common objective of supporting ecologically preferable compensatory mitigation options to meet no net loss of aquatic resource function. However, until it can be updated, the VWPP Regulation expresses a preference for on-site/in-kind compensatory mitigation. VWPP staff should follow the Rule and cite the Rule and this guidance as justification when accepting compensatory mitigation packages, which follow the Rule's preference hierarchy. VWPP staff must continue to work with the USACE to overcome differing agency objectives and accept unified compensatory mitigation packages in cases where the compensation package differs from the Rule.