

## Ratio Method

The Ratio Method (RM) is a qualitative approach to determining the amount of credits available at a proposed wetland mitigation bank. The RM has historically been utilized to determine credits at mitigation banks when other more quantitative methods, such as HGM or WRAP, have not been available. The RM utilizes the following set of Base Ratios:

Type of Mitigation	Value of Impacted Wetland		
	Low	Medium	High
Restoration	1:2	1:3	1:4
Enhancement	1:3	1:5	1:9
Preservation	1:7	1:12	1:23

These ratios qualitatively consider 1) the different levels of functional lift associated with different types of mitigation, 2) the time required for the mitigation site to reach maturity or target condition, 3) the risk of the mitigation not achieving functional replacement, and 4) an appropriate consideration of the loss of function over time.

The following example illustrates how the RM would be applied to determine the number of available credits and the Compensatory Ratios at a proposed bank.

The first step in applying the RM is to determine what percentage of a proposed bank are wetland restoration, wetland enhancement, and wetland preservation (as defined in the Federal Banking Guidance) and what portion of the bank consists of non-wetlands. For example, a theoretical proposed 1300-acre wetland mitigation bank consists of:

Mitigation Action	Affected Area (acres)	Percent of Total Area
Restoration	1000	77
Enhancement	200	15
Preservation	50	4
Non-wetland	50	4
Totals	1300	100

Since non-wetlands compose only a small fraction of the total acreage of this bank, the bank has a total of 1300 [acre] credits and each [acre] credit represents 77% wetland restoration, 15% wetland enhancement, 4% wetland preservation, and 4% upland preservation. The Base Ratios are then utilized to determine the bank's Compensatory Ratios:

Type of Mitigation	Area Affect (AA)	Value of Impacted Wetland = BR (base ratio) x AA		
		Low BRxAA	Med BRxAA	High BRxAA
Restoration	0.77	1:2 = 1: 1.54	1:3 = 1: 2.31	1:4 = 1: 3.08
Enhancement	0.15	1:3 = 1: 0.46	1:5 = 1: 0.77	1:9 = 1: 1.38
Preservation	0.4	1:7 = 1: 0.27	1:12 = 1: 0.46	1:23 = 1: 0.88
*Non-wetland	0.4	N/A	N/A	N/A
Total		1: 2.27	1: 3.54	1: 5.35

\*As non-wetlands compose only a fraction of the total acreage of this bank, they were not included in determining Compensatory Ratios.

Thus, in this example, the proposed bank has 1300 [acre] credits and the bank's Compensatory Ratios are:

Low Quality Wetland Impacts	Medium Quality Wetland Impacts	High Quality Wetland Impacts
1:2	1:3.5	1:5

Therefore, if the Corps determined that a project within the service area of this proposed bank needed mitigation for impacts to 3 acres of medium quality wetlands, then 10.5 credits from this bank would be necessary to compensate or off set those wetland losses.