

US ARMY CORPS OF ENGINEERS

COLORADO MITIGATION PROCEDURES

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COLORADO MITIGATION PROCEDURES (COMP V1)

- Provides regulatory direction for wetland and stream mitigation; stream debit and credit calculator based on functional loss and improvement assessed using existing qualitative methods
- Was originally adapted from similar methodologies used in other Corps Districts that have been in effect for several years
- Not intended to be a comprehensive guide for addressing compliance with the 2008 final Mitigation Rule on compensatory mitigation for losses of aquatic resources
- Currently out on Public Notice - Any comments received through September 7, 2019 will be considered by the Corps to determine whether to modify, adopt, or terminate the use of the COMP



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WHY?

- Credits and debits are units of measure (e.g., a functional or areal measure or other suitable metric) that represent the accrual or attainment of aquatic functions at a mitigation site, or the loss of aquatic functions at an impact site (33 CFR 332.2)
- Establish a procedure for quantifying compensatory mitigation debits and credits that will provide predictability and consistency
- Predictability and consistency:
 - Site-to-site
 - District-to-District
 - Regulator-to-regulator



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DEBITS AND CREDITS

SECTION 404 OF CLEAN WATER ACT

Debit is a unit of measure (e.g. a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an impact or project site. (33 CFR 332.2)

Credit is a unit of measure (e.g. a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. (33 CFR 332.2)



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WETLAND CREDITING AND DEBITING

Credit calculation:

- Calculated using COMP proposed ratios
- Type of mitigation activity (establishment, re-establishment, enhancement, rehabilitation, preservation) drives the number of credits generated

Debit calculation:

- Calculated using SPD Mitigation Ratio Setting Checklist
- Starts with base ratio of 1:1, adjusted by impact-mitigation comparison
- Accounts for functional factors such as location, conversion, temporal loss



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WETLAND CREDITING

- Primarily intended for use in determination of mitigation banking credits
- Functional scores may help inform an appropriate range for credit ratios
- Feeds into MRSC

Mitigation Activity	Credit Ratio (Work Area:Credit)
Wetlands	
Re-establishment	1:1 - 2:1
Establishment	1:1 - 2:1
Rehabilitation of function	2:1 - 3:1
Enhancement of existing state	3:1 - 5:1
Preservation in combination with above activities, and as considered per the criteria at 33 CFR 332.3(h)	5:1-10:1*
Preservation alone	Case-by-Case as considered per the criteria at 33 CFR 332.3(h)*
Uplands	
Upland buffer enhancement and preservation	5:1-15:1*

*Total combined buffer/preservation credit typically cannot exceed 10% of the total bank credit



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WETLAND DEBITING

MRSC

- Considers functional based factors
 - Distance
 - Conversion
 - Timing/Temporal Loss
- Functional scores can factor in ratio setting
- Thresholds
 - More than minimal
 - Typically 0.10 acre

1	Date: 05/26/18	Corps File No:	SEK-2018-0016	Project Manager:	M.H. Haskins	Hydrology:	Intermittent
2	Impact Site Name:	Avila, Florida	ORM Resource Type:	River/Stream	Impact Distance:		Linear
3	Impact Character or HGM:	riparian	Impact Area:	0.02			
4		Column A		Column B		Column C	
5	Mitigation Site Name:	On-Site Preservation	Mitigation Site Name:	Mitigation Bank	Mitigation Site Name:		
6	Mitigation Type:	Preservation	Mitigation Type:	Creation	Mitigation Type:		
7	ORM Resource Type:	River/Stream	ORM Resource Type:	Floodplain Riparian	ORM Resource Type:		
8	Coastal/HGM Type:	riparian	Coastal/HGM Type:	riparian	Coastal/HGM Type:		
9	Hydrology:	Intermittent	Hydrology:		Hydrology:		
10	2.a Quantitative Impact Mitigation	Starting ratio:	1.00 ± 0.00	Starting ratio:	1.00 ± 0.00	Starting ratio:	1.00 ± 0.00
11	Ratio adjustment:			Ratio adjustment:	0.00	Ratio adjustment:	
12	Baseline ratio:	1.00 ± 0.00	Baseline ratio:	1.00 ± 0.00	Baseline ratio:	1.00 ± 0.00	
13	PM justification:	see Table 1	PM justification:	see Table 1	PM justification:	see Table 1	
14	2.b Quantitative Impact Mitigation	Ratio adjustment from DPM procedure:		Ratio adjustment from DPM procedure:		Ratio adjustment from DPM procedure (locked):	
15	2.c Preservation [Table 2, also A]	Baseline ratio:	1.00 ± 0.00	Baseline ratio:	1.00 ± 0.00	Baseline ratio:	1.00 ± 0.00
16							
17	3 Preservation [Table 2, also E]	Ratio adjustment:	0.00	Ratio adjustment:		Ratio adjustment:	
18							
19	4 Mitigation site	Ratio adjustment:	0	Ratio adjustment:	0	Ratio adjustment:	
20		PM justification: Within same watershed		PM justification: Mitigation is outside watershed		PM justification:	
21							
22	5 Wet loss of aquatic resource surface	Ratio adjustment:	0	Ratio adjustment:	0	Ratio adjustment:	
23		PM justification: Preservation of aquatic features		PM justification: credit for wetland creation		PM justification:	
24							
25	6 Type conversion:	Ratio adjustment:	0	Ratio adjustment:	0	Ratio adjustment:	
26		PM justification: In-kind features		PM justification:		PM justification:	
27							
28	7 Risk and uncertainty:	Ratio adjustment:	0	Ratio adjustment:	0	Ratio adjustment:	
29		PM justification: 0.1 for permit responsible mitigation		PM justification: No risk or uncertainty with bank credit		PM justification:	
30							
31	8 Temporal loss:	Ratio adjustment:	0	Ratio adjustment:	0	Ratio adjustment:	
32		PM justification: All proposed features already exist as a layer in time between impact and mitigation		PM justification: No temporal loss with bank credit		PM justification:	
33							
34	9 Final mitigation ratio(s):	Baseline ratio from 2.a, b or c:	1.00 ± 0.00	Baseline ratio from 2.a, b or c:	1.00 ± 0.00	Baseline ratio from 2.a, b or c:	1.00 ± 0.00
35		Total adjustment (3-B):	0.00	Total adjustment (3-B):	0.00	Total adjustment (3-B):	0.00
36		Final ratio:	1.00 ± 0.00	Final ratio:	1.00 ± 0.00	Final ratio:	1.00 ± 0.00
37		Proposed impact (total):	0.02	Proposed impact (total):	0.02	Proposed impact (total):	0.02
38			Linear		Linear		Linear
39		In Resource Type:	riparian	In Resource Type:	riparian	In Resource Type:	riparian
40		Coastal or HGM:	riparian	Coastal or HGM:	riparian	Coastal or HGM:	riparian
41		Hydrology:	intermittent	Hydrology:	intermittent	Hydrology:	intermittent
42							
43		Required Mitigation:	0.02	Required Mitigation:	0.02	Required Mitigation:	0.02
44			Linear		Linear		Linear
45		of Resource Type:	riparian	of Resource Type:	riparian	of Resource Type:	riparian
46		Coastal or HGM:	riparian	Coastal or HGM:	riparian	Coastal or HGM:	riparian
47		Hydrology:	intermittent	Hydrology:	intermittent	Hydrology:	intermittent
48							
49		Proposed Mitigation:	0.02	Proposed Mitigation:	0.02	Proposed Mitigation:	0.02
50			Linear		Linear		Linear
51		Impact Unmitigated:	0	Impact Unmitigated:	0	Impact Unmitigated:	0
52			X		X		X
53		Additional PM amount:	0.00	Additional PM amount:	0.00	Additional PM amount:	0.00
54			Linear		Linear		Linear
55							
56	10 Final comprehensive mitigation requirements:	Final requirement in for					
57		All PM's discussed, if applicant's proposed mitigation is less than threshold requirement and additional mitigation (total) proposed, complete additional calculation					
58		Only enter proposed mitigation into spreadsheet if accepting applicant's lower (than required) ratio proposal.					
59							
60							

◀ ▶
Checklist
Table 1 (Qualitative)
Table 2 (Preservation)
BAN



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STREAM CREDITING AND DEBITING

- Colorado Stream Quantification Tool (CSQT) is a spreadsheet calculator that consolidates a suite of metrics into a single condition score, and then multiplies that score by stream length to generate the Functional Feet Score
- Applied at a site before and after a project to calculate a change (delta) between existing condition and proposed condition (loss or gain)
- Relies on the Δ Functional Feet as the basis for calculating stream mitigation credits and debits
- COMP v1 includes Appendix A – Stream Debit Calculation Guide which provides a step-by-step instructions on how project impacts and functional loss can be evaluated



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CALCULATING FUNCTIONAL LIFT AND LOSS

$$\frac{\text{QUANTITY (linear feet of stream)} \times \text{CSQT CONDITION SCORE (\% function)}}{\text{FUNCTIONAL FEET}}$$

Functional lift or loss is (Δ Functional Feet)
= Proposed FFS- Existing FFS

The delta can be either positive or negative. The delta is the unit of measure representing the loss or accrual of aquatic functions at an impact or project site.



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STREAM THRESHOLDS

- All activities with permanent loss of 300 linear feet of stream or more (i.e., due to activities that result in reduced natural stream length like piping or channelization)
- All activities authorized by a general permit with permanent impacts to greater than 500 linear feet of stream (i.e., other activities which impact stream function but do not necessarily result in loss of stream length or area)
- All activities resulting in permanent impacts to streams that meet one of the following criteria:
 - Projects requiring a Standard Individual Permit
 - Nationwide Permits that require a waiver
 - Establishment of a mitigation bank or ILF

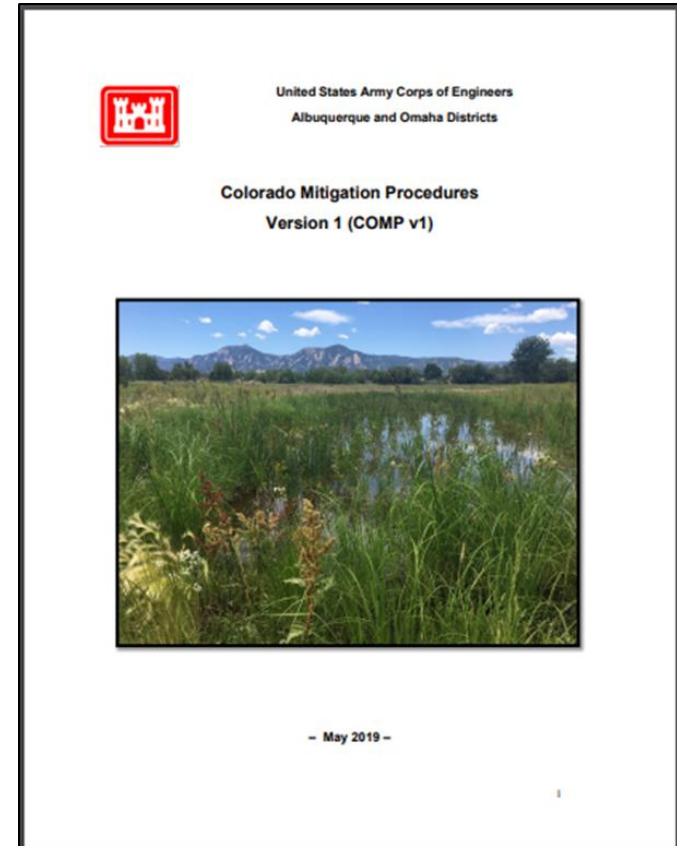


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REMINDER

Currently out on PN until October 11, 2019



<https://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/Public-Notices/Article/1843018/special-public-notice-colorado-mitigation-procedures-and-the-colorado-stream-qu/>



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