

STREAM IMPACT ASSESSMENT WORKSHEET

Blue Cells are for Data Input

Red Cells are Auto-Calculated

Site Information:

Project:

Stream Name:

Stream Reach ID:

Total Contributing Drainage Area (acres): 0.52 mi²

Site Aquatic Life Use: Select

Downstream Aquatic Life Use: Select

Valley Constrained?: Select

Latitude DD:

Longitude DD:

HUC8:

HUC10:

HUC12:

River Mile:

Mitigation Category: Project Site

Margin of Safety:

Mitigation Category: Downstream Use

Constrained Valley: average flood prone width (ft):

EXISTING CONDITION

CHANNEL LENGTH

Channel Length (ft):

Existing High Flow (Valley) Length (ft):

Sinuosity (k):

STREAM GRADIENT

Channel Gradient:

AQUATIC HABITAT CONDITION

QHEI Score (QHEI1):

Habitat Condition Factor (CF₁): No HI, <2 MI MHW Attributes

CF₁ = Habitat Condition Factor:

QR₁ = Habitat Index Ratio:

C₁ = Channel Area (acres):

H₁ = Adjusted Aquatic Habitat (acres):

FLOOD PRONE AREA CONDITION

FLOOD PRONE AREA (includes channel)

Gradient	Area (acres)	Width (ft)
Low Flood Prone Area:	<input type="text" value="1.00"/>	<input type="text" value="45"/>
Intermediate Flood Prone Area:	<input type="text" value="1.70"/>	<input type="text" value="77"/>
High Flood Prone Area:	<input type="text" value="3.80"/>	<input type="text" value="172"/>
Total Flood Prone Area:	<input type="text" value="6.50"/>	<input type="text" value="294"/>

Flood Prone Area Soils Quality:

Flood Prone Soils Quality Factor:

A₁ = Adjusted Flood Prone Area: (acres)

PROPOSED CONDITION

CHANNEL LENGTH

Resulting Channel Length (ft):

Resulting High Flow (Valley) Length (ft):

Sinuosity (k):

STREAM GRADIENT

Channel Gradient:

AQUATIC HABITAT CONDITION

QHEI Score (QHEI2):

Habitat Condition Factor (CF₂): HI + MI MHW Attributes > 4, HI < 2

CF₂ = Habitat Condition Factor:

QR₁ = Habitat Index Ratio:

C₂ = Channel Area (acres):

H₂ = Adjusted Aquatic Habitat (acres):

FLOOD PRONE AREA CONDITION

FLOOD PRONE AREA (includes channel)

Gradient	Area (acres)	Width (ft)
Frequently Flooded Area:	<input type="text" value="0.40"/>	<input type="text" value="18"/>
Intermediate Flooded Area:	<input type="text" value="0.50"/>	<input type="text" value="23"/>
High Flooded Area:	<input type="text" value="0.80"/>	<input type="text" value="36"/>
Total Flood Prone Area:	<input type="text" value="1.70"/>	<input type="text" value="77"/>

Flood Prone Area Soils Quality:

Flood Prone Soils Quality Factor:

A₂ = Adjusted Flood Prone Area: (acres)

Stream Condition Targets for Replacement as Mitigation

Blue Cells are for Data Input

Red Cells are Auto-Calculated

Project: Stream Mitigation Spreadsheet Example
Stream Name: No Paddle Creek
Stream Reach ID: Example Impact Calculation
River Mile: 0

Aquatic Life Use: Class II PHWH
Margin of Safety: 1.0

HABITAT TARGETS

Site-Specific QHEI Target Applicable?: Select

See text. Based on reference reach.

Values less than default target with Ohio EPA Permission only.

Site-Specific QHEI Target: 65.0

Site-Specific QHEI Max: 80.0

See Text. Base on Regional Data

FLOODPLAIN COMPARISON WIDTHS

Reference Zones:	Width (ft):	Area (ac)
Full Streamway Width:	115	2.54
Intermediate Zone:	58	1.28
Core Zone:	35	0.78
Vegetated Riparian Buffer Target:	NA	NA
Minimum Vegetated Riparian Buffer:	NA	NA
Vegetated Riparian Buffer Required?	No	
Minimum Frequently Flooded (%):	30%	
Minimum Frequently Flooded (acres):	0.78	

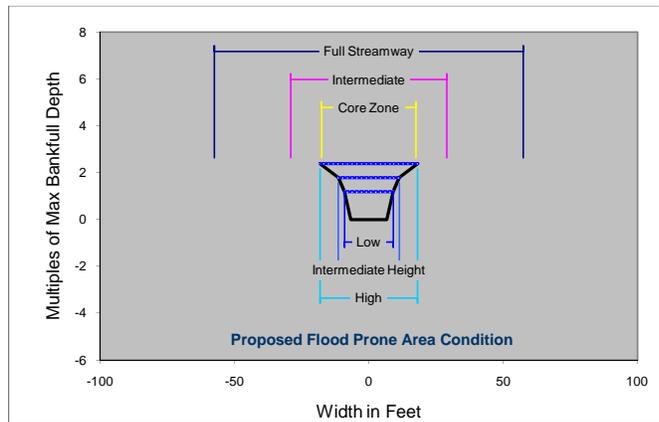
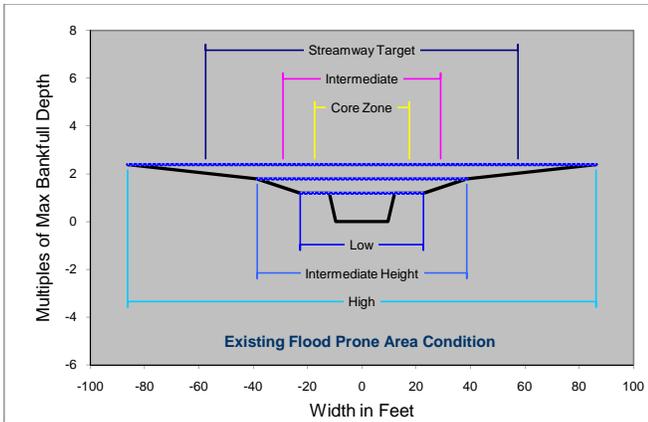
CALCULATED VALUES:

EXISTING CONDITION

W_{BKF} = Bankfull Width (ft):	11.4
L = Channel Length (ft):	2,017
$A = (W_{BKF} * L)/43,560$ = Channel Area (acres):	0.53
Default Target QHEI:	NA
Design Target QHEI:	NA

PROPOSED CONDITION

W_{BKF} = Bankfull Width (ft):	11.4
L = Channel Length (ft):	1,152
$A = (W_{BKF} * L)/43,560$ = Channel Area (acres):	0.30



Project: Stream Mitigation Spreadsheet Example
Stream Name: No Paddle Creek
Stream Reach ID: Example Impact Calculation
River Mile: 0

Stream Impact Summary Sheet

Project: Stream Mitigation Spreadsheet Example
Stream Name: No Paddle Creek
Stream Reach ID: Example Impact Calculation
River Mile: 0

Feet Impacted (channel): 2,017
Feet Impacted (flood plain): 960
Aquatic Life Use: Class II PHWH
Margin of Safety: 1.0

Pre vs. Post Impact Screening

On-Site Replacement Check List:		Existing	Resulting	Target or Minimum
Resulting Habtiat Index ≥ Existing?	NA	NA	NA	
Resulting Habitat Index ≥ Target?	NA			NA
Resulting Habitat Condition Mitigative?	NA	NA	NA	NA
Resulting Channel Length ≥ Existing?	No	2,017 feet	1,152 feet	
Resulting FP ≥ Existing?	No	2.6 acres	0.5 acres	2.5 acres (target)
Resulting FP ≥ Minimum?	No			0.8 acres (minimum)

On-Site Replacement Criteria Screening

Stream Mitigation Category: Default Minimum Degradation Criteria Met?

Downstream Mitigation Category: Does the Debit-Credit Model Apply?

Does Downstream Use Design Apply? On-Site Floodprone Area Credits Applicable?

Anti-degradation Exclusion Met? On-Site Habitat Credits Applicable?

Default Minimum Degradation Criteria Applicable? Additional Mitigation Required?

Credit/Debit Accounting:

	Existing	Resulting	Difference
Adjusted Flood Prone Area (acres):	2.6	0.0	(2.6)
x M.O.S.:	1.0	NA	
Debit/Credit Flood Prone Acres:	2.6	0.0	(2.6)
Adjusted Aquatic Habitat (acres):	NA	NA	NA
x M.O.S.:	NA	NA	
Debit/Credit Aquatic Habitat (acres):	NA	NA	NA

Additional Mitigation Location Debit Adjustment

	Flood Prone (acres)	Habitat (acres)	
On-Site/Flow Path Debits:	2.6	NA	Base Value
Within HUC 12 Debits:	2.9	NA	(+10%)
Within HUC 8 Debits:	3.1	NA	(+20%)
Outside Watershed Debits:	3.7	NA	(+40%)