STORMWATER LOCAL ASSISTANCE FUND (SLAF): PLANS AND SPECIFICATIONS CHECKLIST

Locality:	SLAF Grant #:
Project Name:	Date:
Prepared by:	Title:
Email:	Phone #:
DEQ Approved:	Date:

INSTRUCTIONS

Complete sections A through E and G. The questionnaire should be completed electronically. Please submit all documents, including design plans, used in the preparation of this questionnaire.

A. SCOPE/DESCRIPTION of WORK

B. PLAN AND DESIGN

Item	YES/NO	For DEQ Use
1. Is the Project and crediting consistent with the SLAF Grant Application and original Authorization Letter? (If no, DEQ staff will refer to Section F to reconfirm project eligibility.)	Select	Select
2. Are the Plans at 100% design and are bid-ready?	Select	Select
3. Have the Final Plans, dated [ ], been approved by local VESMP Authority?	Select	Select
4. All elements included in the submitted design are reasonable and necessary costs associated with deriving the water quality benefits of the BMP or Stream Restoration project. (If no, please describe in comments section or attachment.)	Select	Select
5. Is there a separation of costs for eligible and non-eligible items? (If applicable, please describe in comments section or attachment.)	Select	Select
6. The appropriate table in Sections 1, 2 & 3 below, are free of any discrepancies between the project details from the SLAF application to final design (If no, please describe in comments section or attachment.)	Select	Select

COMMENTS:

C. REQUIRED DOCUMENTATION

Item	YES/NO	For DEQ Use
1. Local VESMP Authority Plan Approval Letter (Choose Applicable Design Approval Letter).	Select	Select
2. Design Certification for each practice (Choose BMP or Stream Restoration).	Select	Select
3. Pollutant Credit Calculation Worksheet.	Select	Select
4. Electronic copy of final approved plans and one hard copy plan set (11x17) to the DEQ project manager. All plans must be signed & sealed by a professional engineer.	Select	Select
5. Electronic copy of final Project Specifications.	Select	Select
6. Surface Water Impact (SWI) Certification (Surface Water Impact Certification).	Select	Select
7. All required environmental permits as listed on the SWI.	Select	Select
8. Responsibilities and Maintenance Plan (must be received no later than thirty (30) days from the date of the Notice of Substantial Completion).	Select	Select

COMMENTS:

D. PROJECT SPECIFICATIONS

Item	YES/NO	Location of Information	For DEQ Use
1. Substantial Completion procedures.	Select		Select
2. Erosion and Sediment Control procedures.	Select		Select
3. "Or Equal" clause allowing for the substitution of equipment, materials, or provisions.	Select		Select
4. As-Built Drawing procedures.	Select		Select

COMMENTS:

E. PROJECT COSTS

SLAF Application	
SELECT Opinion of Probable Total Project Cost based on plan design level:	☐Concept, ☐35%, ☐65%, ☐95%
Opinion of Probable Total Project Cost =	$
BMP: Cost per pound of TP Reduction =	$
Stream Restoration: Cost per linear feet =	$
Stream Restoration: Cost per pound of TP Reduction =	$
Plan Design	
100% Plan Design Opinion of Probable Total Project Cost =	$
BMP: 100% Plan Design Cost per pound of TP Reduction =	$
Stream Restoration: Cost per linear feet =	$
Stream Restoration: Cost per pound of TP Reduction =	$

F. PROJECT ELIGIBILITY (For use by DEQ staff only)

Item	For DEQ Use	For DEQ Use
1. The existing and post project nutrient reduction crediting is in accordance with the Bay Program TMDL Protocols, DEQ TMDL Guidance, and SLAF Program Guidelines.	Select	Select
2. Fiscal Year Priority Ranking Review – review was performed, and project was deemed consistent in cost effectiveness and water quality benefit.	Select	Select
3. Cost per pound of total phosphorus (TP) was below the maximum set.	Select	Select
4. Capital projects for reducing and treating stormwater runoff.	Select	Select
5. Costs are associated with the planning, design, permitting, inspection, and construction.	Select	Select
6. Supports a need for an existing stormwater pollution problem and prevents a future environmental problem due to stormwater runoff.	Select	Select
7. Designed in accordance with applicable USEPA Chesapeake Bay Program TMDL and SLAF Program Guidelines.	Select	Select
8. The existing and post pollutant reduction crediting calculation methodology and/or values are comparable to those used in the application. If not, provide explanation in the comment section below.	Select	Select

COMMENTS:

G. CLICK THE LINK BELOW THAT CORRESPONDS WITH YOUR PROJECT TYPE AND COMPLETE THE REQUIRED DOCUMENTATION

#1: STRUCTURAL BMPS

#2: URBAN STREAM RESTORATION AND OUTFALL STABILIZATION

#3: LIVING SHORELINE

#1: PROJECT TYPE: STRUCTURAL BMPs

Project Calculations Submitted at SLAF Application

Type of Stormwater Retrofit:	Choose a Retrofit

Initial Pollutant Loading

Method Used:	Choose a Method

BMP Drainage Basin Information (acres)

Pervious Cover=		Impervious Cover=		Time of Concentration (hrs.)=		Contributing Drainage Area=	

Starting Pollutant Load in Drainage Area (lbs/yr)

Total Phosphorus=		Total Nitrogen=		Total Suspended Solids=	

Existing BMP Type:				Proposed BMP Type:	
Choose a Type				Choose a Type	
Existing BMP Efficiency (%)	Downward Modification(s)	Downward Modification (%)	Revised Existing Efficiency Modification(s) (%)	Proposed BMP Efficiency (%)	Net Increase in Retrofit Efficiency (%)
Choose a Method	Select All that Apply (Maximum of 5):	Select the Total Percentage:	Existing Efficiency (%) - (Downward Modification (%) x Existing Efficiency (%))	Choose a Method	Proposed BMP Efficiency (%) - Revised Existing Efficiency Modification(s) (%)
TP =	☐No Sediment Forebay ☐No Micro-pool	Choose a %	TP =	TP =	TP =
TN=	☐No Outlet Protection ☐Short-Circuiting		TN=	TN=	TN=
TSS=	☐Undersized TV ☐Other(describe below)		TSS=	TSS=	TSS=

Final Pollutant Load Reduction Drainage Area (lbs/yr)

*Total Phosphorus =		*Total Nitrogen =		*Total Suspended Solids =	

Offset Requirements Addressed: Choose an Option

Project Calculations at Final Plan Design

Type of Stormwater Retrofit:	Choose a Retrofit

Initial Pollutant Loading

Method Used:	Choose a Method

BMP Drainage Basin Information (acres)

Pervious Cover=		Impervious Cover=		Time of Concentration (hrs.)=		Contributing Drainage Area=	

Starting Pollutant Load in Drainage Area (lbs/yr)

*Total Phosphorus =		*Total Nitrogen =		*Total Suspended Solids =	

Removal Efficiency Calculations

Existing BMP Type:				Proposed BMP Type:	
Choose a Type				Choose a Type	
Existing BMP Efficiency (%)	Downward Modification(s)	Downward Modification (%)	Revised Existing Efficiency Modification(s) (%)	Proposed BMP Efficiency (%)	Net Increase in Retrofit Efficiency (%)
Choose a Method	Select All that Apply (Maximum of 5):	Select the Total Percentage:	Existing Efficiency (%) - (Downward Modification (%) x Existing Efficiency (%))	Choose a Method	(Proposed BMP Efficiency (%) - (Revised Existing Efficiency Modification(s) (%)
TP=	☐No Sediment Forebay ☐No Micro-pool	Choose a %	TP=	TP=	TP=
TN=	☐No Outlet Protection ☐Short-Circuiting		TN=	TN=	TN=
TSS=	☐Undersized TV ☐Other(describe below)		TSS=	TSS=	TSS=

Final Pollutant Load Reduction Drainage Area (lbs/yr)

*Total Phosphorus =		*Total Nitrogen =		*Total Suspended Solids =	

Offset Requirements Addressed (DEQ Guidance Memo GM20-2003; Appendix III): Choose a Selection

Comments

*Final Pollutant Load Reduction Credit = (Starting Pollutant Load) x (Net Increase in Retrofit Efficiency (%))

#2: PROJECT TYPE: URBAN STREAM RESTORATION & OUTFALL STABILIZATION

Project Calculations Submitted at SLAF Application

Watershed Size (ac):	Impervious Cover (%):	Managed Turf (%):	Length of Restoration (lf):

Does restoration include changes in Pattern, Profile, and/or Dimension? YES☐/NO☐
Describe:

Soil Data

Number of Soil Borings:		Stream Segment 1	Stream Segment 2	Stream Segment 3	Stream Segment 4	Stream Segment 5
Composite Average	BD (lb/ft³)					
	TP (lb/T)					
	TN (lb/T)					

Estimated Pollutant Reductions

Protocol 1 Credit for Prevented Sediment 50% Effectiveness (T/yr) =

	Protocol 1 (lb/yr)	Protocol 2 (lb/yr)	Protocol 3* (lb/yr)	Protocol 4 (lb/yr)	Protocol 5 (lb/yr)	TOTAL Load Reduction (lb/yr)
Sediment						
TP						
TN						

Project Calculations at Final Plan Design

Watershed Size (ac):	Impervious Cover (%):	Managed Turf (%):	Length of Restoration (lf):

Does restoration include changes in Pattern, Profile, and/or Dimension? YES☐/NO☐
Describe:

Soil Data

Number of Soil Borings:		Stream Segment 1	Stream Segment 2	Stream Segment 3	Stream Segment 4	Stream Segment 5
Composite Average	BD (lb/ft³)					
	TP (lb/T)					
	TN (lb/T)					

Estimated Pollutant Reductions

Protocol 1 Credit for Prevented Sediment 50% Effectiveness (T/yr) =

	Protocol 1 (lb/yr)	Protocol 2 (lb/yr)	Protocol 3* (lb/yr)	Protocol 4 (lb/yr)	Protocol 5 (lb/yr)	TOTAL Load Reduction (lb/yr)
Sediment						
TP						
TN						

*Protocol 3: Application: Credit for Floodplain Reconnection Volume is an estimate; final credit determined with post-construction As-Built record drawing and modeled floodplain reconnection. Final: Credit for final Floodplain Reconnection Volume as determined by post-construction As-Built record drawing and modeled floodplain reconnection.

#3: PROJECT TYPE: LIVING SHORELINE

Project Calculations Submitted at SLAF Application

SELECT Type of Living Shoreline: Choose a Selection

Does Project Meet the Qualifying Conditions? YES☐/NO☐

☐ Site is currently experiencing shoreline erosion (or is replacing existing armor)
☐ Site will be graded, vegetated, and excess sediment removed or used, and
☐ A marsh fringe habitat (for non-structural & hybrid system w/ sill) or a beach/dune habitat (for hybrid w/ breakwater) will be created, enhanced, or maintained

Is Submerged Aquatic Vegetation (SAV) present? YES☐/NO☐

Is the presence of SAV based on VIMS SAV Monitoring Data? YES☐/NO☐
Or on-site SAV Survey? YES☐/NO☐

Is a Slope Stability Analysis provided for shoreline grading steeper than the angle of repose? YES☐/NO☐

Is the Shoreline Sediment Erosion Rate (E, ft/yr) based on VIMS Shoreline Change Online Viewer? YES☐/NO☐
If No, Describe:

Are site-specific values used in place of 1 or more of the protocol default values for:
Sand Reduction Factor for sediment (0.337), **Sediment Bulk Density** (93.6 lb/ft3), **P or N sediment concentration** (0.000205 lb P/lb TSS or 0.000290 lb N/lb TSS), **Denitrification load reduction** (85 lb TN/ac of marsh plantings/yr), **Sedimentation TP or TSS load reduction** (5.289 lb TP or 6,959 lb TSS per ac of marsh plantings/yr), **Marsh Redfield Ratio TP or TN load reduction** (0.3 lb TP or 6.83 lb TN/ac of marsh plantings/yr)? YES☐/NO☐

If Yes - Provide attachments describing source and methods for site-specific values being used.

Design Parameters (Provide additional sheets for additional shoreline segments as needed)

Length of Shoreline (ft)	Estimated Shoreline Erosion Rate (ft/yr)	Average Bank Height (ft)	Estimated Bank Instability Reduction (%)**	Area of Marsh Plantings (ac)

Estimated Pollutant Reductions

Pollutant	Protocol 1 (lb/yr)	Protocol 2 (lb/yr)	Protocol 3 (lb/yr)	Protocol 4 (lb/yr)	TOTAL (lb/yr)
TP					
TN					
TSS					

Project Calculations at Final Plan Design

SELECT Type of Living Shoreline: Choose a Selection

Does Project Meet the Qualifying Conditions? YES☐/NO☐

☐ Site is currently experiencing shoreline erosion (or is replacing existing armor)
☐ Site will be graded, vegetated, and excess sediment removed or used, and
☐ A marsh fringe habitat (for non-structural & hybrid system w/ sill) or a beach/dune habitat (for hybrid w/ breakwater) will be created, enhanced, or maintained

Is Submerged Aquatic Vegetation (SAV) present? YES☐/NO☐

Is the presence of SAV based on VIMS SAV Monitoring Data? YES☐/NO☐
Or on-site SAV Survey? YES☐/NO☐

Is a Slope Stability Analysis provided for shoreline grading steeper than the angle of repose? YES☐/NO☐

Is the Shoreline Sediment Erosion Rate (E, ft/yr) based on VIMS Shoreline Change Online Viewer? YES☐/NO☐
If No, Describe:

Are site-specific values used in place of 1 or more of the protocol default values for:
Sand Reduction Factor for sediment (0.337), **Sediment Bulk Density** (93.6 lb/ft3), **P or N sediment concentration** (0.000205 lb P/lb TSS or 0.000290 lb N/lb TSS), **Denitrification load reduction** (85 lb TN/ac of marsh plantings/yr), **Sedimentation TP or TSS load reduction** (5.289 lb TP or 6,959 lb TSS per ac of marsh plantings/yr), **Marsh Redfield Ratio TP or TN load reduction** (0.3 lb TP or 6.83 lb TN/ac of marsh plantings/yr)? YES☐/NO☐

If Yes - Provide attachments describing source and methods for site-specific values being used.

Design Parameters (Provide additional sheets for additional shoreline segments as needed)

Length of Shoreline (ft)	Estimated Shoreline Erosion Rate (ft/yr)	Average Bank Height (ft)	Estimated Bank Instability Reduction (%)**	Area of Marsh Plantings (ac)

Estimated Pollutant Reductions

Pollutant	Protocol 1 (lb/yr)	Protocol 2 (lb/yr)	Protocol 3 (lb/yr)	Protocol 4 (lb/yr)	TOTAL (lb/yr)
TP					
TN					
TSS					

* If the project grading angle of repose exceeds the slope stability threshold a detailed site slope and bank stability analysis documenting that no additional sediment and associated pollutants will enter the nearshore waters, to include the following conditions: 1) the project was graded and vegetated so that the bank is stable, and 2) excess sediment was removed offsite so that the sediment does not enter the nearshore waters. Bank analysis can demonstrate the site is stable with a minimum risk of erosion. This should be coordinated with appropriate DEQ personnel to ensure proper methods, reporting, and requirements are met, and the project meets this basic qualifying condition. The local or state agency may decide not to issue the credit based on the information regarding site slope and stability assessment that is provided.