

REQUEST FOR PROPOSALS

SFY12 Chesapeake & Atlantic Coastal Bays Trust Fund

LOCAL IMPLEMENTATION GRANT SUMMARY

The State of Maryland (State) and its Partners are solid ting proposals from local governments and non-governmental organizations to implement the hom-point source pollution control projects as identified in the States 2-Year Milestone (Attached) in priority geographic areas to improve the health of the Chesapeake Bay, Atlantic Coastal Bays and local water quality. Proposals are being accepted for State Fiscal Year 2012 through this Request for Proposal (RFP); total proposals awarded will be subject to funding availability.

- WHO: Competetive grant program is open to local governments and non-governmental or ganizations, including: county and blocounty agencies, municipalities, forest conservancy district boards, soil conservation district, academic institutions and nonprofit organizations having a demonstrated ability to implement non-point source pollution control projects.
- WHAT: Grants will fund the implementation of the non-point source pollution reduction actions identified in Maryland's current 2-Year Milestone over a period of one to three years
- WHEN: Application Deadline: Received by Issuing Officer by 5 p.m., May 28th, 2010.
- AMOUNT: Expected grant awards of \$1 Million to \$5 Million annually, for up to three years, per proposal.
- WHERE: Submit Applications to:

Local Implementation Grant C/O Jennifer Radin Chesapeake & Coastal Program Maryland Department of Natural Resources 580 Taylor Ave., E-2 Annapolis, MD 21401 (pH 10.260.8745 (f) 410.260.8739 jacilin @dor.state.md us

For more information, visit:

http://www.dnr.state.md.us/ccp/funding/trust_fund.asp

Anacostia Watershed -Lower Northwest Branch-Urban Watershed Nutrient and Sediment Reduction







 Piedmont to Coastal Plain
 DA ~ 33 mi²
 Imp. ~17%
 ARP Project Cluster Restoration Approach



General Project Objectives:

- Reduce Streambank Erosion and Streambed Downcutting
- Reduce Downstream Sediment and Nutrient Loads
- Enhance Aquatic Habitat
- Improve Stream/Floodplain Reconnections
- Create/Restore Wetland Areas
- Protect Existing Infrastructure (e.g., Pipes, Footbridges, Etc.)
- Minimize Removal of Large Trees/Overall Disturbance
- Improve Overall Aesthetics



STREAM BANK EROSION MONITORING

Rapid Stream Assessment Technique (RSAT) Level III - Stream Channel Condition Evaluation

- Evaluate Erosion Conditions (Stability) for both Left and Right banks
- 2. Monumental Cross-sections
- 3. Bank Pin Erosion Rate Study
- 4. Soil Texture, Chemistry and Bulk Density Determination

RSAT EVALUATION – EROSION CONDITION EVALUATION

Bank Stability

- Bank sloughing; slumping or failure
- Exposed roots
- Number of tree falls
- Bank Soil Types "By Feel"
- Left and Right Banks







BANK PIN EROSION RATE STUDY



SOIL TEXTURE, CHEMISTRY AND BULK DENSITY DETERMINATION

- Oakfield Model B Soil
 Probe
- Six Hour Holding/Constraint time (nitrate/nitrogen)
- Modified USDA Bulk
 Density Test Procedure





Preliminary Stream Bank Results -Soil Loss- DRAFT

Erosion Condition	Length*	Bank Height**	Retreat Rate**		Soil Bulk Density**	Soil Loss
	(ft)	(ft)	(ft/year)*	ft³/yr	lbs/ft ³	tons/yr
Severe (N=5)	1,723	6.7	1.09	12,592.44	94.87	597.35
Moderate/ Severe (N=2)	1,347	7.1	0.46	4,377.80	93.75	205.21
Moderate (N=2)	2,512	7.2	0.46	8,192.78	91.88	376.40
Other*** (N=1)	11,382	5.8	0.19	12,306.65	84.70	521.16
Total	16,965					1,700.12

*Includes the length of both right and left bank

**Average value

*** Includes Slight/Moderate, Slight and Stable bank erosion condition

Preliminary Stream Bank Results -Soil and Nutrient¹ Loss-DRAFT

Erosion Condition	Length*	Retreat Rate**	Soil Loss	TP Loss	TN Loss	
	ft	ft³/yr	tons/yr	lbs/yr	lbs/yr	
Severe	1,723	12,592.44	597.35	367.97	716.82	
Moderate/ Severe	1,347	4,377.80 205.21		126.41	246.25	
Moderate	2,512	8,192.78	376.40	231.86	451.67	
Other***	11,382	12,306.65	521.16	321.04	625.39	
Total	16,965		1,700.12	1,047.27	2,040.14	
¹ Mean Concentration mg/kg lbs/ton						

¹ Mean Concentration	mg/kg	lbs/ton
Total P	308	0.616
Total N	606	1.2

PSU Agricultural Analytical Services Lab Results as Mass of constituent per mass of soil *Includes the length of both right and left bank **Average value

*** Includes Slight/Moderate, Slight and Stable bank erosion condition

Next Steps

- Compute the Sediment and Nutrient loss from Dissolved Fractions (Concentrations in Water)
- Continue Bank Pins Measurement
- Follow-Up Stream Bank Soil Chemistry/Nutrient Characterization
- Reshoot All 20 Stream Cross-Sections
- Complete Spring 2014 'Bug' and Fish IBI-Related Taxonomic Identification Work

Phong Trieu Metropolitan Washington Council of Governments ptrieu@mwcog.org