UNDERWOOD & ASSOCIATES
LANDSCAPE ARCHITECTURE ♦ ECOLOGICAL RESTORATION
A DESIGN/BUILD Co.

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HB869 – Wetlands and Waterways Program – Authorizations for Ecological Restoration Projects
Testimony on Behalf of: Underwood and Associates
Position: Support

Underwood & Associates, Inc. is an Annapolis-based small business committed to combining the needs of a developing society with an adjusting environment by restoring native ecosystems through our regenerative philosophy. Underwood & Associates, Inc. is a trusted expert that has invented the Regenerative Stream Channel (RSC), Step Pool Storm Conveyance (SPSC), and dynamic living shoreline approaches that have been adopted by many local, state, and federal agencies across the Chesapeake Bay Watershed and around the world.

The environment is suffering, and we must promptly restore failing ecosystems before things worsen. Currently, it is just as challenging to get a permit for an ecological restoration project as it is to obtain a permit for commercial or residential development. The permit process is set up to delay development. However, and unfortunately, as the restoration projects go through the same process as development projects, restoration projects are unnecessarily delayed. This bill reflects the immediate changes we believe will positively impact permitting the most appropriate ecological restoration projects in Maryland.

1. We must define "ecological restoration" in the law. We propose the following definition: **Ecological restoration is "the restoration or enhancement of natural systems to improve ecosystem services."** The state is spending millions of dollars on ecological restoration projects; however, there is still a lot of ambiguity about what the term means. Companies are operating in Maryland claiming to be conducting "ecological restoration" but are not. Some of these companies are doing significant damage to Maryland's ecosystems at taxpayers' expense because the term is not well defined.

2. A separate and distinct permit and review track should be developed for restoration projects. This should consist of an application that reflects the areas of scrutiny explicitly needed for ecological restoration projects and different review criteria tailored explicitly to restoration. The current application (attached) is a significant impediment to restoring Maryland's ecosystems and needs an overhaul. **This step should be undertaken immediately.**

3. There must be a significant overhaul of all state statutes and regulations related to tidal and non-tidal wetland permitting to make the process more efficient and solve conflicts between the various bodies of law and regulations. This may take years. We do not have to waste. **In the immediate term, the Department must have the ability to permit the alteration of a wetland or waterway when it is determined to be best for the holistic restoration of the ecosystem. Additionally, applications reviews must be conducted in a manner that weighs the benefits of a restored ecosystem over the benefits of an individual resource.**

I appreciate the engagement the discussions with various stakeholders and MDE during this process and look forward to making continued progress.

Chris Becraft - Partner, Underwood, and Associates.

Joint Federal/State Application for the Alteration of any Floodplain, Waterway, Tidal or NonTidal Wetland in Maryland.

Instructions for the
JOINT FEDERAL/STATE APPLICATION FOR THE ALTERATION OF ANY FLOODPLAIN, WATERWAY, TIDAL OR NONTIDAL WETLAND IN MARYLAND

Please refer to the following question, located on the application under (2) Project Description, (a) Give written description of project:

Will there be temporary or permanent tree clearing occurring on the overall project site (i.e., uplands and wetlands), including but not limited to, tree clearing for site development, road/highways, utilities, mining, stormwater management, restoration, energy production and transmission, etc.? _____ Yes _____ No
If yes, total estimated acres of tree clearing for the overall project site:
_____ acres

Instructions: Please indicate "Yes" or "No" if temporary or permanent tree clearing is proposed on the overall project site (i.e., uplands and wetlands). Tree clearing may be proposed as part of the overall project construction activities, including but not limited to site development, construction of roads or highways, stormwater management facilities and best management practices, aquatic resource restoration and enhancement, energy production

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Tree transition, which often occurs in restoration projects, is different than tree loss. Restoration projects change ecosystems from degraded to functioning. Often times, the means that the trees transition from upland trees to forested wetlands. This application has no consideration for tree transition.

activities and installation of utilities. If you checked "Yes" that permanent or temporary tree clearing is proposed as part of the overall project scope, please fill in the blank and identify the total estimated acres of tree clearing for the overall project site, including upland and wetland areas. If you need further clarification, please contact the Army Corps of Engineers at 410-962-3670.

Effective January 2021, *new* questions below have been added to the application.

i. Pile Driving for Category A Activities: For the protection of listed species, pile driving methods must maintain noise level thresholds not to exceed 150 db re 1 µPa RMS or 206 db peak re 1 µPA and must meet one of the following conditions:

(1) Plastic or concrete piles must be less than 12 inches when a cushioned impact hammer or vibratory hammer is utilized for installation.

(2) Timber piles must be 10 inches or less when a vibratory hammer is utilized for installation.

(3) Vinyl or timber sheet piles must be 24 inches or less in width, as measured from the outer edge of corrugation to the inner edge of corrugation, when a cushioned impact hammer or vibratory hammer is used.

(4) Pile driving activities must be located within freshwater tributaries or within tidal or nontidal wetlands.

(5) Piles of any size/type with any hammer method must be installed behind diversion structures or in the dry when the tide is out in the intertidal zone.

(6) Piles of any size/type with any hammer method must be installed between November 30 and March 15.

(Note: Any pile driving activity that does not meet one of the conditions above must be reviewed by the Corps as a Category B activity or an alternate Corps permit review process, as appropriate.

ii. Pile Driving for Category A and Category B Activities: For Category A and Category B activities, pile driving must be initiated with a soft start each day of pile driving, building up power slowly from a low energy start-up over a 20 minute period to allow for fish and other wildlife to leave the area.

Pile driving is not applicable in ecosystem restoration permitting.

Sample Plans and Checklists

Sample Plans and Checklists are provided at the end of this document. Please refer to the sample plans, as appropriate. Please include the information shown on the sample plan on your proposed plan.

Clearly show locations of impacts, on the plans.

Itemize each impact site with area of wetland or buffer impact, linear feet of stream and area of stream, cubic yards of floodplain disturbance.

Indicate whether the impact is temporary or permanent.

Permanent Impacts: Permanent impacts are those that result in a change to a wetland, wetland buffer, water, or floodplain that will not be reversed or removed.

Temporary impacts: Temporary impacts are those that are of short duration, and after the activity is completed, result in a restoration of the disturbed wetland, water, wetland buffer, or floodplain to its previous condition.

There is no discretion as to what is "permanent," and no consideration that permanence, to restore an ecosystem, is a positive.

Is it a permanent impact to reintroduce water to a wetland that has degraded over time?

2. PROJECT DESCRIPTION
a. GIVE WRITTEN DESCRIPTION OF PROJECT:

Has any portion of the project been completed? _____Yes _____No If Yes, explain:

Is this a residential subdivision or commercial development? _____Yes _____No
If yes, yes, total number of acres on property _____ acres

Ecological Restoration is not an option.

Will there be temporary or permanent tree clearing occurring on the overall project site (i.e., uplands and wetlands), including but not limited to, tree clearing for site development, road/highways, utilities, mining, stormwater management, restoration, energy production and transmission, etc.)? ___ Yes _____ _____ No

If yes, total estimated acres of tree clearing for the overall project site: _____ acres

b. ACTIVITY: Check all activities that are proposed in the wetland, waterway, floodplain, and nontidal wetland buffer as appropriate.

A. _____ filling
B. _____ dredging
C. _____ excavating
D. _____ flooding or impounding water
E. _____ draining
F. _____ grading
G. _____ removing or destroying vegetation
H. _____ building structures

Ecosystem restoration techniques should be listed.

Area for item(s) checked: Wetland _____ (sq. ft.) Buffer (Nontidal Wetland Only) _____ (sq. ft.)
Expanded Buffer (Nontidal Wetland Only) _____ (sq. ft.)
Area of stream impact _____ (sq. ft.)
Length of stream affected _____ (linear feet)

c. TYPE OF PROJECTS: Project Dimensions

The terms "restored" and "enhanced" should be available

For each activity, give overall length and width (in feet), in columns 1 and 2. For multiple activities, give total area of disturbance in square feet in column 3. For activities in tidal waters, give maximum distance channelward (in feet) in column 4. For dam or small ponds, give average depth (in feet) for the completed project in column 5. Give the volume of fill or dredged material in column 6.

		Length (Ft.) 1	Width (Ft.) 2	Area (Sq. Ft.) 3	Maximum/Average Channelward Encroachment 4		Pond Depth 5	Volume of fill/dredge material (cubic yards) below MHW or OHW 6
A.	Bulkhead							
B.	Revetment							
C.	Vegetative Stabilization							
D.	Gabions							
E.	Groins							
F.	Jetties							
G.	Boat Ramp							
H.	Pier							
I.	Breakwater							
J.	Repair & Maintenance							
K.	Road Crossing							
L.	Utility Line							
M.	Outfall Construction							
N.	Small Pond							
O.	Dam							
P.	Lot Fill							
Q.	Building Structures							
R.	Culvert							
S.	Bridge							
T.	Stream Channelization							
U.	Parking Area							
V.	Dredging							

1. _____ New 2. _____ Maintenance 3. _____ Hydraulic 4. _____ Mechanical
W. _____ Other (explain) _____

Ecological restoration isn't even listed as a type of project. The state and local governments spend hundreds of millions of dollars on these projects that are vitally important; however, from the very beginning of the process, they are an afterthought.

b. ACTIVITY LOCATION: Check one or more of the following as appropriate for the type of wetland/waterway where you are proposing an activity:

A. _____ Tidal Waters
B. _____ Tidal Wetlands
C. _____ Special Aquatic Site (e.g., mudflat, vegetated shallows)
D. _____ Nontidal Wetland
E. _____ 25-foot buffer (nontidal wetlands only)
F. _____ 100-foot buffer (nontidal wetland of special State concern)
G. _____ In stream channel
1. _____ Tidal 2. _____ Nontidal
H. _____ 100-year floodplain (outside stream channel)
I. _____ River, lake, pond
J. _____ Other (Explain)

Ecological restoration projects typically have to check every one of these boxes. The reason is because a resilient project will restore each of these activity locations. We are restoring these resources, not impacting them. However, every box checked means more conflicting statutes and regulations to navigate (which we can guess is not the intent).

THE FOLLOWING INFORMATION IS REQUIRED BY THE STATE (blocks 4-7):

4. REDUCTION OF IMPACTS: Explain measures taken or considered to avoid or minimize wetland losses in F. Also check Items A-E if any of these apply to your project.

A. _____ Reduced the area of disturbance
B. _____ Reduced size/scope of project
C. _____ Relocated structures
D. _____ Redesigned project
E. _____ Other _____
F. Explanation

Describe reasons why impacts were not avoided or reduced in Q. Also check Items G-P that apply to your project.

G. _____ Cost
H. _____ Extensive wetlands on site
I. _____ Engineering/design constraints
J. _____ Other natural features
K. _____ Parcel size
L. _____ Other regulatory requirement
M. _____ Failure to accomplish project purpose
N. _____ Safety/public welfare issue
O. _____ Inadequate zoning
P. _____ Other
Q. Description

Once again, the questions “what is an impact,” and “are all impacts bad” become issues. Under current MDE regs and statute, introducing water to a floodplain is an “impact,” and impacts are presumed to be negative. However, the science says that a floodplain must continuously have water added to it to function. This is a major issue.

There is no “ecological restoration” option available under the current law, or this permit, to explain why impacts are not being avoided or reduced. This oversight leads to projects that are designed to fit permit parameters, not the needs of the ecosystem.

6. ALTERNATIVE SITE ANALYSIS: Explain why other sites that were considered for this project were rejected in M. Also check any items in D-L if they apply to your project. **(If you are applying for a letter of authorization, do not complete this block.)**

A. _____ 1 site B. _____ 2 - 4 sites C. _____ 5 or more sites

Alternative sites were rejected/not considered for the following reason(s):

D. _____ Cost
E. _____ Lack of availability
F. _____ Failure to meet project purpose
G. _____ Located outside general/market area
H. _____ Greater wetlands impact
I. _____ Water dependency
J. _____ Inadequate zoning
K. _____ Engineering/design constraints
L. _____ Other

M. Explanation:

7. PUBLIC NEED: Describe the public need or benefits that the project will provide in F. Also check Items in A-E that apply to your project. **(If you are applying for a letter of exemption, do not complete this block.)**

A. _____ Economic
B. _____ Safety
C. _____ Health/welfare
D. _____ Does not provide public benefits
E. _____ Other _____

F. Description

This section has absolutely nothing to do with restoration, but still must be completed. Ecological restoration projects are chosen for specific areas that have failing ecosystems. This is not a development plan. There is no alternative site.

TMDL, carbon reduction and 2014 Chesapeake Bay Watershed Agreement goals are all public benefits that should be listed.

SUPPLEMENTAL INFORMATION TO BE INCLUDED ON PLANS, DRAWINGS, OR VICINITY MAPS

In addition to the information indicated on the previous pages, you should include the following on the 8 1/2 x 11 site plans and any blueprints you have submitted:

1. Delineation of any wetland buffers or expanded buffers, clearly marked and differentiated.
2. Location of mitigation area, if proposed on the same site as the project.

Note: If you are proposing a complex project you may wish to submit engineering blueprints of your project with the application form to expedite review.

Mitigation Location Map: If you are proposing that nontidal wetland mitigation be done at a different location than the proposed project, you should submit a map showing the location of the mitigation site in relation to the proposed nontidal wetland losses.

Ecological restoration projects should not have a "mitigation area."

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Applications must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and streams on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and appropriate regional supplement published by the Corps. Wetlands must be shown on all plans submitted with the application. All wetlands on site must be delineated and shown on the overall site plan. 8½ x 11 inch plans with topography showing relation of the wetlands and project impacts must be submitted. Copies of the wetland reports and data sheets used in making the determination must be included with your application submittal.