



## The BUBBAs

Recognizing innovators and showcasing techniques to solve the challenges of protecting and restoring urban watersheds.



# BEST URBAN BMP

in the Bay Award 

## The 2023 BUBBAs

*to recognize the best management practices that have been installed  
in the Chesapeake Bay Watershed*

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Presented by the Chesapeake Stormwater Network  
<https://chesapeakestormwater.net/about-the-bubbas/>

# 1 Contest Objective

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Now in its 6<sup>th</sup> year, the Best Urban BMP in the Bay Awards contest (BUBBAs) recognizes the best practices and programs being implemented in the urban environment across the Chesapeake Bay watershed. The BUBBAs shine a light on local innovators using creative approaches to protect and restore local watersheds. While other low impact development (LID) competitions focus on the design of new stormwater practices, CSN wants to also recognize on-the-ground techniques being used to tackle difficult stormwater problems. Put simply, the goal of the BUBBAs is three-fold:

- 1 Recognize innovators in the field who are using new and creative techniques to treat runoff and protect streams;
- 2 Share these innovative techniques with other communities who could benefit from the lessons learned; and
- 3 Inspire interaction among our 11,000+ member network of stormwater professionals throughout the Bay watershed and beyond.

# 2 Eligibility

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Any project submitted for consideration of a BUBBA award must meet the following criteria:

1. Must have been installed in the ground (or implemented) within the last 5 years: beginning January 1, 2018 – December 31, 2022
2. Must be located in the Chesapeake Bay Watershed
3. Projects that were submitted for consideration in previous years are not eligible for consideration unless they have been significantly changed

### 3 Cash Awards and Winner Recognition

Winners will be announced to CSN’s network of 11,000 stormwater professionals within the Bay watershed and press releases will be distributed to local media partners.

- ❖ The top three finalists in each award category will receive certificates of recognition and will be prominently featured on the CSN website
- ❖ Category winners will be recognized at a virtual awards ceremony and have the option to be featured in future CSN communication programs, including webcasts and newsletter spotlights.
- ❖ Category winners will also receive an invitation to the 2023 Stormwater Partners Retreat in Shepherdstown, WV on April 12-14, 2023.
- ❖ A Grand Prize winner will be selected by a people’s choice vote. The winner will receive a cash award of \$5,000, which can be made out to their organization, or a charitable cause of their choosing.

### 4 Timeline/Competition Calendar:

December 12, 2022	Contest opens
February 24, 2023	Deadline for submissions
March 2023	Design Jury begins project review
Week of March 20, 2023	BUBBAs Awards Ceremony & Popular Vote Kickoff
April 13, 2023	Grand Prize Winner Announced

### 5 Distinguished Jury

BUBBAs category winners are selected by a distinguished jury of stormwater professionals who represent diverse perspectives in the field of stormwater and watershed management. Each category will be reviewed by a jury of 4-5 members from the list below, who will evaluate project submissions based upon the criteria outlined in Section 6 of this guide using their own professional judgment.

<b>Name</b>	<b>Affiliation</b>
Jamie Alberti	Alliance for the Chesapeake Bay
Drew Altland	Ecotone
Joe Battiata	Virginia DEQ; CSN Board
Lettice Brown	City of York, PA
Ted Brown	Biohabitats
Jim Caldwell	Howard County, Maryland (retired); CSN Board
Ryan Davis	Alliance for the Chesapeake Bay
Kevin Du Bois	U.S. Department of Defense
Liz Feinberg	Calvan Environmental
Lisa Fraley-McNeal	Center for Watershed Protection
Heather Gewandter	City of Rockville, Maryland
Beth Ginter	Chesapeake Bay Landscape Professionals
Norm Goulet	Northern Virginia Regional Commission
Alana Hartman	West Virginia DEP; CSN Board
David Hirschman	Hirschman Environmental; CSN Board
James Hunter	Morgan St. University; CSN Board
Cecilia Lane	District Dept. of Energy and Environment; CSN Board
Sarah Lane	Maryland Dept. of Natural Resources
Neely Law	Fairfax County, Virginia
Nguyen Le	Chesapeake Bay Trust
Kelly Lindow	CityScape Engineering
Scott Lowe	McCormick Taylor, Inc.
Claire Mulhardt	Capital Region Water; CSN Board
Liam O'Meara	EQR
Renee Reber	National Parks Conservation Association
Amanda Rockler	Maryland Sea Grant
Josh Running	Stantec
Tom Schueler	Chesapeake Stormwater Network (retired)
Jill Sunderland	Hampton Roads Planning District Commission
Radhika Wijetunge	Howard County, MD; CSN Board
Carol Wong	Center for Watershed Protection

# 6 Award Categories

Entries will be accepted in seven categories this year. Each category has its own relevant criteria that should be addressed within your project narrative. Remember that to really stand out, tell us how your project goes above and beyond any applicable stormwater or restoration requirements to represent something unique or innovative. If you are unsure what category to submit your project under, please contact David Wood ([Wood.CSN@outlook.com](mailto:Wood.CSN@outlook.com)).

Applications submitted to each category should describe how the BMP meets any or all of the relevant criteria in that category.



## **Best Habitat Creation in an Urban Watershed**

- a) Any restoration project that creates or restores a high-quality blend of wetland or upland wildlife habitats in the urban or suburban landscape are eligible in this category. Examples of eligible projects include:
  - i. Forest canopy creation, such as riparian or urban forest planting.
  - ii. Wetland or meadow creation or restoration.
  - iii. Large-scale conservation landscape and ecological restoration projects primarily designed to promote wildlife and pollinator habitat.
  - iv. Stream and floodplain restoration projects with demonstrable functional uplift in the channel, floodplain, and riparian corridor.
- b) All projects will receive extra points if they:
  - i. connect with other habitat areas or the stream corridor
  - ii. treat the quality of stormwater runoff from upland development, or
  - iii. attract pollinators, amphibians, songbirds, waterfowl and other wildlife to the project site.

### **NARRATIVE SHOULD INCLUDE:**

- Size of project site (acres)
- Planting palette
- Site conditions prior to planting
- Description of any biological monitoring conducted
- Description of community engagement during project development

- c) Any project built for environmental mitigation purposes is not eligible under this category.

A successful project narrative should describe if/how the habitat you create:

- i. Utilizes native plantings suitable to the soil and water conditions at the site to create diverse habitat zones
- ii. Results in a substantial area of habitat that is protected from future disturbance
- iii. Has a strong plan to maintain habitat over time and help control invasive plants
- iv. Encourages access for the public to explore and learn about the habitat
- v. Supports climate resilience goals



### **Best Residential Stewardship Practice in the Bay**

- a) This category recognizes exceptional stormwater practices installed on a residential property. Example projects include: rain gardens, rainwater harvesting systems, vegetated roofs, conservation landscaping, tree planting, downspout disconnection or soil amendments.
- b) Special consideration is given to projects subsidized under local government incentive programs.
- c) Total investment in residential practices should be generally limited to less than \$7,000. They can be installed by residents, contractors or watershed groups (if possible, please identify the designer/installer in your application).
- d) A successful project narrative should describe if/how your residential stewardship practice(s):
  - i. Effectively treat a substantial portion of runoff from the property
  - ii. Provide aesthetic improvements to the property
  - iii. Include unique or creative design features to improve practice function

#### **NARRATIVE SHOULD INCLUDE:**

- Runoff volume treated
- Practices used
- Landscaping objectives
- Other benefits to resident(s)
- How residents were engaged and whether/how diversity, equity, and inclusion were part of project marketing and pricing

- iv. Provide other benefits to the resident such as reduced basement flooding, reduced heating or cooling costs or ‘backyard’ habitat for songbirds and pollinators
- v. Was marketed to and/or delivered to historically underserved community members.



## Best Stream Restoration Project in the Bay

- a) The category recognizes outstanding projects in the stream corridor that are explicitly designed to enhance the function, stability and ecosystem services of an urban stream.
- b) Your project narrative should describe how your project meets the following criteria. In general, the best restoration projects should:
  - i. Reflect an integrated approach to restore the stream and its floodplain.
  - ii. Meets or exceed clearly stated objectives to improve stream habitat and reduce pollutant delivery to the Bay (some quantitative documentation is helpful here)
  - iii. Successfully withstand significant floods without failing
  - iv. Improve aquatic and terrestrial habitats in the stream reach and floodplain.
  - v. Promote public access, watershed education or neighborhood outreach along the stream corridor.

Decisions about whether a project is best suited for Best Stream Restoration or Best Habitat Creation will be left to the submitter. Please consider primary project goals, outcomes, design components and monitoring efforts in your decision making.

### NARRATIVE SHOULD INCLUDE:

- Length of restored reach and estimate of pollutant load removed
- Description of any monitoring efforts
- Benefits achieved beyond better water quality
- Description of public engagement during project development
- Innovative design elements





## Best Green Infrastructure Practice in Ultra-Urban Areas

- a) This category recognizes the best application of green infrastructure (GI) practices that are built in highly urban areas to reduce flooding and pollutant delivery (more than 50% impervious cover).
- b) Some examples include: green streets, walls, roofs or parking lots, rainwater harvesting systems, urban forestry practices, and permeable hardscapes.
- c) Any private or public sector redevelopment projects that creatively integrate green infrastructure practices into their site plans are encouraged to apply.
- d) A successful project narrative should describe if/how your GI project:
  - i. Utilizes an innovative design to achieve a high reduction of runoff and pollutants from the site
  - ii. Links green infrastructure practices together into an effective treatment train
  - iii. Effectively overcomes the challenges encountered in the ultra-urban environment such as traffic, utilities and other underground infrastructure
  - iv. Prioritized environmental justice and equity
  - v. Utilized climate resilient design principles, such as sizing for future climate conditions, adaptive control, etc.
  - vi. Contributes to one or more of the following:
    - (a) increased urban tree canopy
    - (b) building sustainability (e.g., energy savings, green building certification, etc.)
    - (c) easier and safer pedestrian movement
    - (d) public art and/or an attractive neighborhood or street amenity

### NARRATIVE SHOULD INCLUDE:

- Runoff volume treated, approximate drainage area and amount of impervious cover
- Description of urban site constraints
- Innovative design elements (climate resilience, etc.)
- Community engagement and project selection process



## Best Retrofit in the Bay

- a) This category recognizes the best stormwater projects constructed in the last five years to improve runoff quality from areas that were developed in the past without effective stormwater treatment.

The retrofit can involve either modifications to an existing stormwater BMP or construction of new BMP.

- b) A successful narrative will demonstrate if/how your stormwater retrofit addresses the following:
- i. Sharply reduce pollutants and flooding from the existing developed area (pollutant reduction estimates using the retrofit curves are suggested)
  - ii. Incorporate new or innovative engineering approaches to maximize pollutant removal
  - iii. Solve difficult design challenges or site constraints that might be transferable to retrofit projects in other communities
  - iv. Be reasonably cost-effective in treating runoff generated from its impervious acreage (some general cost documentation is requested)
  - v. Promotes environmental equity or benefits an under-served community
  - vi. Utilizes climate resilient design principles, such as sizing for future climate conditions, adaptive control, media amendments, etc.
  - vii. Enhance local habitat, create attractive green space or serve as a neighborhood or community amenity.

### NARRATIVE SHOULD INCLUDE:

- Runoff volume treated and estimate of pollutant load removed
- Approximate drainage area and amount of impervious cover
- Total cost of the retrofit
- Innovative design elements (climate resilience, etc.)
- Community engagement and project selection process



## Best Outreach Campaign in the Bay Watershed

- a) This category recognizes effective stormwater education and outreach campaigns that seek to change behaviors that tangibly reduce stormwater pollution in a community.
- b) The program can be offered by a municipal stormwater agency or nonprofit organization that goes well beyond the minimum required by their local stormwater permits.
- c) A successful narrative should describe how your campaign or program addresses the following:
  - a. Focus on specific behaviors or actions by residents or businesses that generate pollutants of concern in the Chesapeake Bay watershed (e.g., nutrients, bacteria, plastics or toxics)
  - b. Transmit a clear, simple, or even humorous message that helps the public understand how the behavior change can improve water quality
  - c. Use a mix of social marketing, new media and traditional outreach methods to capture the eyeballs of the desired audience
  - d. Improve diversity, equity, inclusion and justice (DEIJ) by building relationships and/or growing capacity with underrepresented communities to address community-identified needs
  - e. Have well-defined metrics for evaluating the success of the campaign

### NARRATIVE SHOULD INCLUDE:

- Water quality problem targeted
- Stewardship behavior targeted
- Description of outreach techniques used
- How success or progress was tracked



## Most Innovative Stormwater Permit Implementation

a) The category recognizes specific program innovations in how local stormwater permit requirements are met that directly lead to improved water quality outcomes in local receiving waters. The submission must focus on a single initiative or program innovation, rather than an entire entity or MS4 program.

i. The permit program can be administered by a municipal or a non-traditional MS4 located within the boundaries of the Chesapeake watershed. The innovative function should have been instituted within the last five years and go beyond the minimum required by your local stormwater permit.

ii. Examples of local program functions may include:

1. water quality monitoring programs,
2. stormwater asset management innovations,
3. strengthening staff and municipal training programs
4. GIS mapping efforts,
5. protocols for inspecting and maintaining BMPs
6. unique partnerships to improve program delivery
7. initiatives to strengthen DEIJ principals within the MS4 program
8. shifting efforts to address multiple priorities on a limited budget (flooding, capital improvement, etc.)

iii. Pending a sufficient pool of submissions, separate awards will be made to a Phase 1 community, and to a locality or non-traditional entity operating under a Phase 2 MS4 permit.

iv. Note that local education and outreach programs are NOT eligible for this category (but can be submitted under the Best Outreach Campaign category).

b) The strongest contenders in this category should be able to describe in their narrative how their program innovation helped to improve local water quality and meets two or more of the following criteria. The local innovation should:

### NARRATIVE SHOULD INCLUDE:

- Permit type (Phase I, Phase II, Non-traditional)
- Description of innovative program
- Quantification of benefits (pollutant reductions, rate of practice delivery, cost savings, etc.)

- i. Improve delivery of BMPs to achieve greater local pollutant reductions.
- ii. Target new pollutant sources/hotspots in the community.
- iii. Engage new community partners, stakeholders or non-stormwater agencies.
- iv. Create budget cost-savings or produce other community benefits.
- v. Showcase lessons that are helpful and transferable to other Bay communities.

## 7 Process for Submissions

All applications are submitted online in a single step. Once the project narrative is written, an application should take a maximum of 15-20 minutes to complete and will involve filling out a one-page online form and uploading a minimum of four photos (including one photo depicting the site before the BMP was installed). Participants have the option to submit additional photos and design plans if they believe these materials will help our jurors understand the project.

Submission Form: <http://chesapeakestormwater.net/bubba-submission/>

### **Submission Instructions**

All submissions will need to include the following information:

1. Basic Project Data
2. Project Narrative
3. Photographs (at least 4 – including one “before” – preferably as individual .jpg)
4. Supporting Materials *optional*

### **Basic Project Data**

The following project data are required to support your submission:

1. Type of practice(s) or program
2. Category applying for
3. Applicant contact information
4. Practice design team (Designer, Contractor, Installer, Architect, etc.)
5. Certificate Names (List of Individuals and/or organizations who should receive a certificate if selected as a winner – please try to stay under 6 certificates per project).
6. Approximate cost
7. Geographic location information (latitudinal/longitudinal info or physical address)
8. A 3-sentence description of the project to be displayed on our website if the project is chosen as one of our finalists

## **Narrative**

Applicants are required to submit a brief narrative (2 pages, 1,500 words **maximum**). To read an exemplary project narrative from last year's contest, please visit [this link](#).

Your narrative should address:

1. Why the project is being submitted for a specific award category
2. How their project addresses the "successful narrative" elements for the category
3. Any other category specific information included in Section 6

In addition, contestants will be asked to respond to the following in their narrative:

- Intent of the project and key objectives accomplished
- Major site, design, or construction challenges you had to overcome or why the project is unique
- Any transferrable lessons that other communities or partners could benefit from.

Narratives that specifically spell out how the project meets the above, will have a better chance in the contest. Remember, you are selling this project to our jurors, tell them why your project or program is awesome!

## **Photographs**

All photographs will become property of CSN who has the right to use them as long the authors are attributed with a correct citation.

1. A minimum of 4 photographs are required for consideration of an award.
2. This includes one of the site before the BMP was installed.
3. All photograph submittals should be in jpg/png format (jpg preferred)
4. Each photograph should be labeled with a descriptive file name to explain what they are trying to portray or participants should include an additional document that provides this information

## **Supporting Materials**

Participants have the option to submit additional photos and design plans that show practice design details that will be helpful for reviewing more detailed elements of the project.

All supporting materials will become property of CSN and will not be returned.

## **Submit Your Project Here:**

<http://chesapeakestormwater.net/bubba-submission/>

Questions about categories or submissions should be directed to David Wood (Wood.CSN@outlook.com).