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Header 1

List View

General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 886901

Procurement Type: Central Purchase Order

Vendor ID: 000000181012

Legal Name: DOWNSTREAM STRATEGIES LLC

Alias/DBA:

Total Bid: \$0.00

Response Date: 08/11/2021

Response Time: 14:55

Responded By User ID: DownstreamStrat2

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Phone: 304-292-2450

SO Doc Code: CEOI

SO Dept: 0313

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Solicitation Description: EOI Green Infrastructure

Total of Header Attachments: 1

Total of All Attachments: 1



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder: 886901
Solicitation Description: EOI Green Infrastructure
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2021-08-12 13:30	SR 0313 ESR08112100000000911	1

VENDOR
 000000181012
 DOWNSTREAM STRATEGIES LLC

Solicitation Number: CEOI 0313 DEP2200000001
Total Bid: 0
Response Date: 2021-08-11
Response Time: 14:55:43
Comments:

FOR INFORMATION CONTACT THE BUYER

Joseph E Hager III
 (304) 558-2306
 joseph.e.hageriii@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Professional engineering services				0.00

Comm Code	Manufacturer	Specification	Model #
81100000			

Commodity Line Comments: I left the contract amount blank because the EOI states that no price or fee information is permitted in the Vendor s EOI response.

Extended Description:

Professional engineering services

**Proposal for:
Green Infrastructure for the Lower New River Watershed
CEOI 0313 DEP2200000001**

August 11, 2021

Submitted to:

**West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th St SE
Charleston, WV 25304**

Submitted by:

**Evan Hansen
Downstream Strategies
911 Greenbag Road
Morgantown, WV 26508
(304) 322-4592**

**Downstream
Strategies**



Ideas that sustain.

ehansen@downstreamstrategies.com

Downstream Strategies Proposal

Environmental Site Assessment

CEOI 0313 DEP2200000001

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- Signature Page
- Purchasing Affidavit
- Designated Contact, Certification and Signature
- Addendum Acknowledgement Form
- Green Infrastructure Vendor Qualification Questionnaire - Attachment A
- Resumes and Qualifications for Key Staff

1. INTRODUCTION

Downstream Strategies, LLC appreciates this opportunity to respond to the West Virginia Department of Environmental Protection's (WVDEP's) Centralized Expression of Interest 0313 DEP2200000001 for Green Infrastructure (GI). We understand that WVDEP is soliciting bids to provide GI education, workshops, and conceptual plans for one small community in the Lower New River Watershed in southern West Virginia.

We have reviewed the solicitation in its entirety and understand the requirements, terms, and conditions. If awarded, we will provide additional documentation, including but not limited to insurance certificates, disclosure of interested parties to contracts, and training certificates.

2. COMPANY PROFILE AND QUALIFICATIONS

Downstream Strategies is an environmental and economic development consulting firm with offices in Morgantown, Davis, Lewisburg, and Berkeley Springs, West Virginia. Founded in 1997, Downstream Strategies is considered *the go-to source* for objective, data-based analyses, plans, and actions that strengthen economies, sustain healthy environments, and build resilient communities. We offer services that combine sound interdisciplinary skills with a core belief in the importance of protecting the environment and linking economic development with natural resource stewardship.

Through our decades of work in West Virginia and the region, we are proud to be recognized as leaders in water science, policy, planning, and implementation. A core component of our work focuses on helping communities learn about, plan for, and implement new solutions. As detailed below, we have consulted for numerous agencies, towns, and nonprofits throughout West Virginia, including in the Lower New River watershed:

- We drafted the watershed-based plan for Wolf Creek, a tributary of the Lower New River.
- We facilitated a stakeholder process to craft the Lower New River State of the Watershed report.
- We consulted with WVDEP to produce West Virginia's municipal separate storm sewer system (MS4) Off-site Mitigation and Payment-in-lieu Guidance.
- We worked with Martinsburg, Charles Town, Paw Paw, Shepherdstown, and other West Virginia communities to identify appropriate GI practices, produce conceptual designs, and draft GI plans.
- We designed, built, and monitored numerous stream and wetland restoration projects across West Virginia.

We are experts in workshop facilitation; GI planning, design, and construction; watershed planning; and stream restoration design and construction. Our staff is experienced in all scales of GI projects, from miles-long stream restoration projects to small bio-retention rain gardens. We recognize and value GI's co-benefits and social infrastructure, serving the people living in the community in addition to providing protection from downstream flooding and pollution.

In addition, our staff can deliver customized maps, conceptual renderings, and construction-grade drawings with software packages such as ESRI Geographic Information Systems (GIS), AutoCAD, and the Adobe Graphic Design Suite. We have significant field experience with GPS data collection and surveying. Our project managers systematically use project management plans and practices to ensure that the entire project team produces the best quality results that meet or exceed our clients' expectations—and that are on time and on budget.

3. KEY STAFF

Evan Hansen, Principal

Mr. Hansen will manage this project and serve as the primary point of contact. He will also take the lead in editing the GI report.

In Mr. Hansen’s 30-year consulting career, he has managed interdisciplinary research teams, performed quantitative and qualitative policy and scientific analyses, provided expert testimony, developed computer tools, and provided training. Mr. Hansen has completed numerous projects across West Virginia related to GI and stormwater, including developing a GI plan for Martinsburg, organizing stormwater workshops with WVDEP, and integrating GI concepts into watershed plans. Mr. Hansen earned a B.S. in Computer Science and Engineering from M.I.T. and an M.S. in Energy and Resources from University of California, Berkeley. This degree combines public policy, environmental science, and engineering.



Matt Pennington, Senior Planner

Mr. Pennington will take the lead in facilitating the workshop, stakeholder engagement, GI education, and site assessments. He will also take the lead in writing the report.

Mr. Pennington is an environmental, community, and economic development planner with extensive expertise helping local governments and organizations balance economic and population growth with the preservation of natural resources. He is an award-winning stormwater professional and focuses on comprehensive planning, GI implementation, hazard mitigation, and securing grants for community projects and programs. Mr. Pennington oversaw the development for the Town of Bath’s and Town of Paw Paw’s GI plans and installations. In 2018, he led the Local Engagement Initiative on behalf of WVDEP and is the former chair of the U.S. Environmental Protection Agency’s Chesapeake Bay Program Local Leadership Workgroup. Mr. Pennington holds a B.S. in Urban and Regional Planning from Frostburg State University.



Josh Saville, Project Scientist

Mr. Saville will present at the workshop, participate in the field tour, and collaborate on conducting required field measurements.

Mr. Saville brings a wealth of field experience and training to support a variety of stream and wetland restoration projects. He has over 10 years of experience in hydrology-related field work, including surveying (GPS, theodolite, level), sediment sampling, riparian and wetland vegetation inventory, stream and groundwater monitoring, chemical/biological monitoring, habitat assessment, and stressor evaluation. He is an experienced equipment operator having completed several stream and wetland restoration projects in addition to building miles of trails. Mr. Saville holds a B.A. in Liberal Arts from West Virginia University with an emphasis on environmental science and is trained in Wildland Hydrology through Level III, Assessment and Analysis of Stream Channels and Habitats, and EPA Rapid Bioassessment Approach.



Joey James, Principal

Mr. James will take the lead in the GIS-related tasks.

Mr. James is a multi-disciplinary GIS analyst with professional experience in the public, nonprofit, and private sectors. He has worked extensively in watershed planning, GIS application development, economic modeling, redevelopment planning, and policy analysis. He has extensive experience with GIS-based cartography, data development, and model creation. Mr. James holds a B.A. in Geography and a Certificate in G.I.S. and Remote Sensing from West Virginia University.



Will Postlethwait, Staff Scientist

Mr. Postlethwait will present at the workshop, participate in the field tour, and collaborate on conducting required field measurements.

Mr. Postlethwait is a stream restoration specialist at Downstream Strategies with over 17 years of experience. He works with watershed groups, state and federal agencies and private sector clients to identify restoration sites, raise funds and implement projects. He is skilled in stream channel, bed, bank and stability assessment, as well as stream and wetland habitat assessment, he designs stream and wetland restoration projects, develops mitigation plans and permits, and has overseen numerous projects through the construction and monitoring phase. Mr. Postlethwait holds a B.S. in Civil Engineering Technology, a B.S. in Architectural Engineering Technology, and an A.S. Civil Engineering Technology from Fairmont State University.



4. EXPERIENCE

The projects below highlight selected relevant experience related to GI, stormwater, stream restoration, and watershed planning. Section 4.1 provides reference names and contact information for several of these projects.

Stream and Wetland Restoration (Ongoing)

Client: Numerous clients, including WVDEP In Lieu Fee Program and private clients

Downstream Strategies has designed, built, and monitored numerous stream and wetland restoration projects across West Virginia. Successful projects have been completed in Logan, Randolph, Jackson, Roane, Jefferson, Hancock, Tucker, Harrison, Hardy, and Pocahontas counties in West Virginia as well as Garrett County, Maryland.

Shepherdstown Green Infrastructure (2020)

Client: Corporation of Shepherdstown

Before joining Downstream Strategies, Matt Pennington provided technical assistance, analysis of public properties, and conceptual designs to Shepherdstown, West Virginia. After reviewing many conceptual options, town officials selected a GI site that contributed flooding to a nearby property. Mr. Pennington developed detailed designs and calculated material volumes, cost estimates, and pollutant load reductions. He also provided construction oversight.

Fayette County Urban Renewal Plan (2020)

Client: Fayette County Urban Renewal Authority

Downstream Strategies crafted an urban renewal plan for Fayette County, West Virginia. Much like a feasibility study, this plan examines the three key projects undertaken by the Fayette County Urban Renewal Authority and outlines priorities and recommendations for ongoing implementation. The report has helped inform the Fayette County Urban Renewal Authority as it prioritizes how to proceed with each of these initiatives.

Paw Paw Green Infrastructure Plan, Design, and Installation (2020-2021)

Client: Town of Paw Paw

Before joining Downstream Strategies, Matt Pennington provided GI technical assistance, analysis, and conceptual designs to the Town of Paw Paw, West Virginia. The plan focused on flood reduction practices that could be installed by Paw Paw's Public Works crew. Mr. Pennington provided hands-on training on GI design and installation of bio-retention and riparian tree plantings. A two-day workshop welcomed other Eastern Panhandle organizations and MS4 utilities for a natural streambank stabilization training.

Martinsburg Green Infrastructure Plan (2019)

Clients: National Fish and Wildlife Foundation, City of Martinsburg

In partnership with the City of Martinsburg, Downstream Strategies, Harbor Engineering, and Canaan Valley Institute secured a Chesapeake Bay Technical Capacity Grant from the National Fish and Wildlife Foundation in 2017 to develop an implementation plan for GI demonstration sites in Martinsburg, West Virginia. The team created conceptual designs for 10 potential sites for GI improvements, created detailed designs and cost estimates for the three highest-priority sites, and developed educational materials to engage the public and secure broad support for GI solutions within the community.

South Berkeley Recycling Center Rain Garden (2018)

Client: Canaan Valley Institute

Downstream Strategies designed and constructed a rain garden demonstration project at the South Berkeley Recycling Center in Inwood, West Virginia. The small wetland acts as a biofiltration unit that removes pollutants from runoff coming from the dirt and gravel driveway and from yard waste—before the pollutants reach nearby streams. Native plants were used in the constructed wetland, which was designed to highlight the beauty and value to wildlife of native wetland species.

Evitts Run Green Infrastructure Park Project (2014)

Client: City of Charles Town

Downstream Strategies and Harbor Engineering were retained by the City of Charles Town, West Virginia to provide technical assistance, permitting guidance, and design services for revitalization of the 12-acre Evitts Run Park Brownfields site. The objective of the project was to utilize GI and low-impact stormwater best management practices to mitigate stormwater flows from existing and future development and adjoining agricultural lands. Technical assistance included reviewing existing environmental studies, performing topographic and boundary surveys, and designing an approximately two-acre wet pond with integrated GI elements along Evitts Run. The project team provided recommendations for management of existing contaminated fill materials encountered during excavation. The team also assisted with preparing and obtaining necessary permits and provided construction specifications suitable for implementation. The finalized design included signs, educational features, and fixtures to educate the public on the benefits of GI and showcased the cooperative efforts between the City of Charles Town and Ranson.

West Virginia MS4 Off-site Mitigation and Payment-in-lieu Guidance (2012)

Client: WVDEP

Downstream Strategies was engaged by WVDEP to research and write a guidance document to help West Virginia's MS4s implement off-site mitigation and payment-in-lieu programs within their service areas. It was produced in collaboration with the Center for Watershed Protection.

Lower New River: State of the Watershed (2011)

Client: National Parks Conservation Association

The Lower New River watershed in West Virginia is a popular destination for whitewater boaters, rock climbers, and hikers; however, the river and several of its tributaries are impaired by bacteria. This report, written to involve the community in restoring the river, documents water quality issues, analyzes stakeholder input, predicts project feasibility, and focuses on priority tributaries for near-term recommendations.

Plants Not Pipes: Promoting Green Infrastructure and its Side Benefits in Region VI (2010)

Client: Region VI Planning and Development Council

This report is part of a broader project to introduce GI to communities in north-central West Virginia and to provide tools to encourage more widespread use of the techniques. It focused not just on reducing the volume and pollution levels of stormwater runoff, but also on GI's side benefits, ranging from reduced maintenance and water utility costs to improved aesthetics and air quality.

Blue Ridge Mountain Communities Area Watershed Plan—Future of the Mountain: A Common Vision for the Jefferson County Blue Ridge Mountain Communities Area (2010)

Client: Jefferson County Commission

The Blue Ridge Mountain Communities Area in Jefferson County, West Virginia lies within the Shenandoah River watershed, a major tributary that affects the water quality of the Chesapeake Bay. This common vision document is based on a facilitated public outreach process with the residents and stakeholders, and it lays the foundation for a watershed plan.

Blue Ridge Mountain Communities Area Watershed Plan: Engineering Report (2010)

Client: Jefferson County Commission

This engineering report provides recommendations to the Jefferson County Commission and Planning Commission and is a component of the watershed plan for the Blue Ridge Mountain Communities Area. It outlines stormwater best management practices for steep slope watershed management, as well as recommendations for impervious surface cover limits and improved road access.

Watershed Based Plan for the Wolf Creek Watershed of the New River (2009)

Client: Plateau Action Network

This watershed-based plan for Wolf Creek will allow incremental Section 319 funds to be spent in the watershed to clean up nonpoint sources of acid mine drainage, sediment, and bacteria. It documents the sources and causes of known impairments, estimates remediation costs, proposes an implementation schedule for remediation, addresses technical and financial needs, and documents an outreach and education program to aid with implementation.

4.1 References

Jim Auxer

Mayor, Corporation of Shepherdstown
(304) 876-2605, jimauxer@yahoo.com

Ron Davis

Town Administrator, Town of Paw Paw
(304) 947-7476, rdavis@townofpawpaw.com

Jeff Wilkerson

Public Works Director, City of Martinsburg
(304) 676-3689, jwilkerson@cityofmartinsburg.org

Kristin Mielcarek

Executive Director, Canaan Valley Institute
(304) 940-3443, kristin.mielcarek@canaanvi.org

Gene Kistler

Plateau Action Network
(304) 663-2521

Gabe Pena

Resource Coordinator, Fayette County Commission
(304) 574-4339 gabriel.j.pena@wv.gov

5. PROJECT APPROACH

GI uses vegetation and soil to address flooding, as opposed to gray infrastructure, which uses pipes and concrete. GI practices can range from planting trees and native perennial flower gardens, to stream restoration and wetland development. Our experienced team focuses on two essential green rules of thumb: 1) listen to the priorities of local communities, and 2) examine those priorities through an environmental lens supported by various funding agencies.

The most effective GI practices are not found on paper; they are found in our landscapes and serve their inhabitants. They are locally understood, accepted, and supported. And they are typically financed with assistance from agencies promoting GI's ecological results to help overcome economic obstacles.

Our team will undertake the following tasks to assist WVDEP's Southern Basin Coordinator in providing GI education, workshops, and conceptual plans to one small community.

5.1 Task 1: Kickoff meeting

After executing a contract, we will immediately organize a kickoff meeting with WVDEP's Southern Basin Coordinator and any other desired participants. The primary objectives of this meeting are to:

1. introduce our team to key project participants,
2. manage project expectations and thoroughly discuss the proposed scope of work, and
3. collectively determine the criteria and process for selecting a partner community.

Due to the ongoing pandemic, we anticipate this meeting would be held by videoconference; however, should WVDEP prefer an in-person meeting, project team members are fully vaccinated and willing to travel.

Downstream Strategies understands that the Southern Basin Coordinator will conduct outreach to several small communities in the Lower New River Watershed. Working with the New River Clean Water Alliance, the Southern Basin Coordinator will identify interest and obtain feedback through a questionnaire/expression of interest. Downstream Strategies can provide WVDEP with assistance in developing this questionnaire. Our previous experience has identified elements that are critical for the long-term success of GI practices at the local government level, and we would like to ensure that these elements are considered at the start of the process.

5.2 Task 2: Community selection

Based on rankings of interested communities using the developed criteria and process, WVDEP and Downstream Strategies will select a partner community in the Lower New River Watershed. WVDEP will send a formal letter informing the community of its selection.

5.3 Task 3: Meeting with selected community

Downstream Strategies will coordinate a meeting with the selected community and WVDEP to:

1. better understand the community's priorities and capacity, while developing a rapport with local officials and representatives;
2. identify potential locations and participant stakeholders for the in-class workshop;
3. create a project timeline and pathway to completion by October 31, 2022;
4. share existing relevant community plans and studies; and
5. develop a short list of publicly owned properties where GI practices can be installed.

5.4 Task 4: Create list of candidate green infrastructure sites

Downstream Strategies will collect and analyze existing community plans and water quality reports to create an overview profile of the area and watershed. A desktop review of any installation constraints such as flooding hazards, utilities, rights of way, and easements will be conducted to generate a suite of feasible GI best management practices that address not only pollution contaminants of concern, but also community priorities.

Candidate sites will be ranked based on prioritization criteria developed in collaboration with WVDEP and the selected community. Criteria may include, for example, stormwater volume capture, ease of implementation, and pollution reduction.

Prior to the workshop, all candidate sites will be formally cleared by MISS Utility (WV 811) to ensure that proposed GI practices will not damage existing infrastructure.

5.5 Task 5: Community and stakeholder workshop

Downstream Strategies will work with WVDEP and the selected community to develop the agenda, invitation list, and invitation flyer for a workshop, which will include morning in-class sessions and an afternoon field component. The morning sessions will be held in-person and over videoconference. Topics to consider include:

- Stormwater Management 101
- GI Basics and Benefits
- Low Impact Development and Green Streets Examples
- Stormwater Management & Erosion and Sediment Control Ordinance Policy
- The Dig Once Approach – Integrating GI into Capital Improvement Projects

After the conclusion of the in-class portion of the workshop, Downstream Strategies will conduct a tour of candidate sites compiled in Task 4. During the tour, participants will provide input on favorable examples of GI practices that may be applicable at each site, as referenced at the morning workshop. Infiltration testing will be conducted to establish the viability of potential GI practices.

Upon request, Downstream Strategies can provide training on topics such as determining total drainage area and basic survey dimensioning to determine square footage of impervious surfaces and available area for proposed GI practices.

Incorporating GIS

Downstream Strategies is a leader in geospatial data integration and routinely uses a variety of ESRI tools. We will use GIS as a cartography tool to produce visually engaging maps to support the workshop and final report. Key features of these maps may include land cover, soils, watershed boundaries, topographic/contour data, and property boundaries.

If the workshop is held via videoconference, we will create visual tools that are tailored to sharing on a computer screen. If the meeting is held in person, we will print large maps. Once the project has been completed, these maps will still be available to the partner community for future presentations.

We also have considerable experience creating interactive web-based maps and will integrate all maps into the GI plan using hyperlinks. Readers of the electronic version of the plan will be able to click on the links and immediately access web maps, where they can manipulate data layers, change base maps, and explore spatial data in a manner not available in a paper or traditional PDF report.

5.6 Task 6: Draft green infrastructure report

We will take the lead in writing and editing the GI report, in collaboration with WVDEP and the selected community.

The report will include:

- community background;
- key community issues related to GI, including strengths and challenges;
- a summary of the stakeholder workshop and site tour, including a list of participants;
- opportunities to advance GI in the community, as identified by the stakeholders;
- site prioritization for conceptual designs;
- conceptual designs and associated pollutant load reductions; and
- next steps for GI implementation such as financing, permitting, material suppliers, and policy development.

The draft will be reviewed by WVDEP and representatives from the selected community. We will then reconvene a virtual workshop to obtain community feedback on the draft report, priority site(s), and preferred best management practices.

We have decades of experience writing technical reports that make the complex understandable to readers. We do this by integrating tables, charts, maps, and photos; by using graphic design tools; and by including an executive summary. We also take pride in our editing skills that allow us to produce professional work products that will reflect well on WVDEP.

5.7 Task 7: Finalize the green infrastructure report

Based upon feedback on the draft report, we will edit the report and produce the final plan in Word and PDF formats. Upon request, supporting data and analyses will be provided in Excel format, and a PowerPoint slide deck will be created for use in public presentations by WVDEP or the partner community.



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Expression of Interest
 Architect/Engr

Proc Folder: 886901		Reason for Modification:	
Doc Description: EOI Green Infrastructure		Addendum #1 issued to publish agency responses to all vendor quesitons.	
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2021-08-09	2021-08-12 13:30	CEOI 0313 DEP2200000001	2

BID RECEIVING LOCATION


BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code: 181012
Vendor Name : Downstream Strategies, LLC
Address : 911 Greenbys Road
Street :
City : Morgantown
State : WV **Country :** USA **Zip :** 26508
Principal Contact : Evan Hansen
Vendor Contact Phone: (304) 292-2450 **Extension:** 100

FOR INFORMATION CONTACT THE BUYER

Joseph E Hager III
 (304) 558-2306
 joseph.e.hageriii@wv.gov

Vendor Signature X  **FEIN#** 37-141-8095 **DATE** 8/11/2021

All offers subject to all terms and conditions contained in this solicitation

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Downstream Strategies, LLC

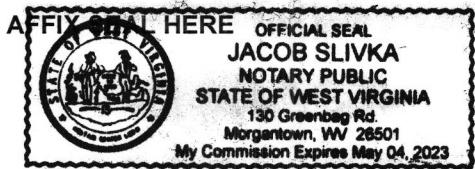
Authorized Signature: [Signature] Date: 8/11/2021

State of West Virginia

County of Monongalia, to-wit:

Taken, subscribed, and sworn to before me this 11 day of August, 2021.

My Commission expires May 4, 2023.




NOTARY PUBLIC [Signature]
Purchasing Affidavit (Revised 01/19/2018)

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Downstream Strategies
(Name, Title)
Evan Hansen, Principal
(Printed Name and Title)
911 Greenbay Road, Morgantown, WV 26508
(Address)
(304) 292-2450 No fax
(Phone Number) / (Fax Number)
ehansen@downstreamstrategies.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

Downstream Strategies
(Company)

(Authorized Signature) (Representative Name, Title)
Evan Hansen, Principal
(Printed Name and Title of Authorized Representative)
8/11/2021
(Date)
(304) 292-2450 No fax
(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.


Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Downstream Strategies
Company


Authorized Signature

8/11/2021
Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
GREEN INFRASTRUCTURE VENDOR QUALIFICATION QUESTIONNAIRE Attachment A**

PROJECT NAME Green Infrastructure (GI) Project for the Lower New River Watershed		DATE (DAY, MONTH, YEAR) 11 August, 2021	FEIN 37-141-8095
1. FIRM NAME Downstream Strategies, LLC		2. HOME OFFICE BUSINESS ADDRESS 911 Greenbag Road Morgantown, WV 26508	3. FORMER FIRM NAME N/A
4. HOME OFFICE TELEPHONE N/A	5. ESTABLISHED (YEAR) 1997	6. TYPE OWNERSHIP Individual <u>Corporation (LLC)</u> Partnership Joint-Venture	
7. PRIMARY GI OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. OF GI PERSONNEL IN OFFICE 911 Greenbag Road, Morgantown, WV 26508 / (304) 292-2450 / Evan Hansen / 4 GI personnel in office			
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Evan Hansen, Marc Glass, Joey James, Kendra Hatcher		8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS N/A	
9. PERSONNEL BY DISCIPLINE			
Watershed Modeler	CONTRACT ADMINISTRATOR(S) 6	WATERSHED ANALYST(S)	— OTHER (LIST BELOW)
	PROGRAM MANAGER(S) 0	SOILS SPECIALIST(S)	— _____
	PROJECT MANAGER(S) 11	TECHNICAL EXPERT(S)	— _____
	QA/QC MANAGER(S) 11	TECHNICAL WRITER(S)	— _____
	PROFESSIONAL ENGINEER(S) 4	OUTREACH SPECIALIST(S)	— _____
MODELER(S)			
			<u>16</u> TOTAL PERSONNEL
Note: Total personnel is less than the sum of personnel by discipline because some personnel are listed in more than one discipline.			
10. DO YOU NEED ADDITIONAL EMPLOYEES TO FULFILL THE REQUIREMENTS OF THIS CONTRACT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

No up job requirements listed and project cost is \$1,000,000.00

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "TMDL Vendor Qualification Questionnaire".

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
We do not anticipate using any outside key consultants/subconsultants.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No

12. A. Is your firm experienced in organizing and facilitating green infrastructure workshops and GI assessment site visits for local governments and/or other stakeholders?

YES NO

- 12.A.1 Provide Names and Number of Workshops/site visits. *At least five, including Martinsburg, Shepherdstown, Paw Paw, South Berkeley, Charles Town.*
- 12.A.2 Provide an example GI workshop/site visit *Please see Section 4 (Experience) of attached proposal.*
- 12.A.3 Provide a detailed description of the methodology to be used to implement a GI workshop and site visit as per EOI.
Please see Section 5 (Project Approach) of attached proposal.

ATTACH ADDITIONAL PAGES AS NECESSARY

12. B. Is your firm experienced in development of low cost, low maintenance green infrastructure concept plans?

YES NO

- 12.B.1 Provide Names and Number of Plans *At least five, including Martinsburg, Shepherdstown, Paw Paw, South Berkeley, Charles Town.*
- 12.B.2 Provide an example GI concept plans *Please see Section 4 (Experience) of attached proposal.*
- 12.B.3 Provide a detailed description of the methodology to be used to develop this GI concept plan as per EOI.
Please see Section 5 (Project Approach) of attached proposal.

ATTACH ADDITIONAL PAGES AS NECESSARY

12. C. Is your firm experienced in development of green infrastructure project designs, construction documents, cost estimates, permitting, and development of GI BMP maintenance plans?

YES NO

- 12.C.1 Provide Names and Number of Project designs, construction docs, maintenance plans *Numerous.*
- 12.C.2 Provide an example GI project design, cost estimate and maintenance plan *Please see Section 4 (Experience) of attached proposal.*
- 12.C.3 Provide a detailed description of the methodology to be used to develop GI project design, construction estimates, cost estimates, permitting and BMP maintenance plan as per EOI.
Please see Section 5 (Project Approach) of attached proposal.

ATTACH ADDITIONAL PAGES AS NECESSARY

12. D. Is your firm experienced in development of green infrastructure projects noted in 12B and 12C in karst?

YES NO

12.D.1 Provide Names and Number of Projects *At least three, including Charles Town, Martinsburg, Shepherds town.*

12.D.2 Provide an example GI project designed in karst. *Please see Section 4 (Experience) of attached proposal.*

12.D.3 Provide a detailed description of the methodology to be used to design a GI project in karst.

Please see Section 5 (Project Approach) of attached proposal.

ATTACH ADDITIONAL PAGES AS NECESSARY

12. E. Is your firm experienced in identifying and applying for funding for green infrastructure implementation projects?

YES NO

12.D.1 Provide Names and Number of Projects *We have identified and applied for funding to implement several GI projects in West Virginia's portion of the Chesapeake Bay watershed.*

12.D.2 Provide an example funding source and application package for a GI project. *We recently received NFWF funding, in partnership with Gannett Valley Institute and the Berkeley Co. PSSP, to design and implement GI practices in Berkeley Co.*

12.D.3 Provide a detailed description of the methodology to be used to identify and apply for GI funding as per EOI.

We have significant experience identifying and applying for funding, but this is not in the EOI.

ATTACH ADDITIONAL PAGES AS NECESSARY

ATTACH ADDITIONAL PAGES AS NECESSARY

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR GI DEVELOPMENT PROJECTS (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.) Hansen, Evan P	YEARS OF EXPERIENCE	
	In field of expertise	In GI-related projects

Brief Explanation of Responsibilities
Please see attached resume.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
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13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR GI DEVELOPMENT PROJECTS

NAME & TITLE (Last, First, Middle Int.) Pennington, Matthew B	YEARS OF EXPERIENCE	
	In field of expertise	In GI related projects

Brief Explanation of Responsibilities
Please see attached resume.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
--	----------------------------------

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR GI DEVELOPMENT PROJECTS** (Insert additional copies as necessary)

NAME & TITLE (Last, First, Middle Int.) <i>Saville, Josh</i>	YEARS OF EXPERIENCE	
	In field of expertise	In GI related projects

Brief Explanation of Responsibilities
Please see attached resume.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
--	----------------------------------

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR GI DEVELOPMENTS PROJECTS**

NAME & TITLE (Last, First, Middle Int.) <i>Postlethwait, Will</i>	YEARS OF EXPERIENCE	
	In field of expertise	In GI related projects

Brief Explanation of Responsibilities
Please see attached resume.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
--	----------------------------------

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE GI PROJECT DEVELOPMENT SERVICES

A list is provided in Section 2 (Company Profile and Qualifications) of attached proposal.

15. CURRENT PROJECTS/ACTIVITIES IN WHICH YOUR FIRM IS PRESENTLY INVOLVED

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED PROJECT COST	PERCENT COMPLETE
<p>We have numerous (50+) current projects/activities on a wide range of topics, including GI, water science and policy, energy, food systems, monitoring and remediation, brownfields, planning, and other topics. We would be happy to provide information about relevant, non-confidential projects/activities upon request after selection.</p>				

TOTAL NUMBER OF PROJECTS:

TOTAL ESTIMATED PROJECT COSTS: \$

Handwritten notes at the bottom of the page, including a signature and date.

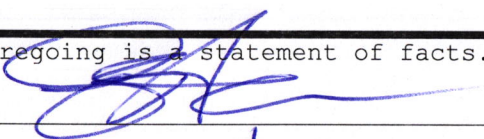
18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF PRIMARY FIRM	ESTIMATED PROJECT COST OF YOUR FIRM'S PORTION	YEAR	EPA APPROVED?	CLIENT NAME AND ADDRESS
Please see answer to Question 16.					

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the WVDEP's TMDL Program.

N/A

20. The foregoing is a statement of facts.

Signature: 
Printed Name: Evan Hansen

Title: Principal

Date: 8/11/2021

Evan Hansen

President

911 Greenbag Road
Morgantown, WV 26508

304.292.2450

www.downstreamstrategies.com
ehansen@downstreamstrategies.com



Profile

Mr. Hansen founded Downstream Strategies in 1997. He explores resource and environmental problems and solutions related to energy and water science and policy. Mr. Hansen manages interdisciplinary research teams, performs quantitative and qualitative analyses, provides training, and provides litigation support and expert testimony. He has completed numerous local planning projects across West Virginia,

Skills and Experience

Overseeing the development of a Source Water Protection Plan and ongoing source water protection activities.

Considerable experience working with watershed organizations and agencies on Clean Water Act and Surface Mining Control and Reclamation Act issues such as permits, TMDLs, antidegradation, and watershed-based plans.

Organized and conducted training workshops for watershed organizations and permittees to promote informed public participation and permit compliance.

Provided expert testimony before appeals boards on NPDES and coal mining permits, before the West Virginia Public Service Commission on water quality issues, and in federal court.

Managed projects related to local economic benefits of acid mine drainage remediation and wind power development.

Researched opportunities for landfill gas-to-energy projects and the generation of carbon credits.

Developed and applied computer models to help clarify solutions to environmental problems.

Served on several committees that help set water-related policies at the state and local levels.

Interfaced effectively with government agencies.

Provided consulting services in Zimbabwe, South Africa, Zambia, Tanzania, Namibia, China, and Egypt.

Education

M.S., Energy and Resources, University of California, Berkeley, 1997. This interdisciplinary program combines environmental science, public policy, economics, and engineering.

B.S., Computer Science and Engineering, Massachusetts Institute of Technology, 1988.

Representative Publications

Betcher M, Hansen E. 2015. Conservation Easements as a Strategy for Drinking Water Protection, Lewisburg, West Virginia. Downstream Strategies and W. Va. Land Trust. July 13.

Boettner F, Hansen E, Ashby B, Clingerman J, Lamont S, Askins N, Knight L. 2013. Pocahontas County Water Resources Management Plan: State planning requirements for inclusion into the West Virginia Water Resource Management Plan. Submitted to the West Virginia Department of Environmental Protection. Submitted by the Pocahontas County Water Resources Task Force. Oct 31.

Hansen E, Zegre S, Hereford A. 2011. Elk headwaters watershed protection plan. Submitted to West Virginia Department of Environmental Protection. Downstream Strategies.

Hansen E, Hereford A, Boettner F, Zegre S. 2010. Plants not pipes: promoting green infrastructure and its side benefits in Region VI. Prepared for Region VI Planning and Development Council. Downstream Strategies.

Boettner F, Hereford A, Hansen E, Merritt A, Burns D. 2009. Watershed-based plan: Muddy Creek of the Greenbrier River, West Virginia. Downstream Strategies.

Matthew Pennington

Senior Planner

911 Greenbag Road
Morgantown, WV 26508

304.707.1920

www.downstreamstrategies.com
mpennington@downstreamstrategies.com

Profile

Mr. Pennington is an environmental, community, and economic development planner with extensive expertise helping local governments and organizations balance economic and population growth with the preservation of natural resources. He is an award-winning stormwater professional and focuses on comprehensive planning, green infrastructure implementation, hazard mitigation actions, and securing grants for community projects and programs.

Skills and Experience

Served for 10 years as Environmental Program Coordinator for the Eastern Panhandle Regional Planning and Development Council in Martinsburg, West Virginia, chaired the Chesapeake Bay Local Leadership Workgroup, served as a liaison to the Bay's Local Government Advisory Committee, and played a leadership role in West Virginia's Chesapeake Bay Restoration Team.

Facilitated and authored comprehensive and strategic planning efforts that engaged diverse stakeholders to better capture and represent the entire community's vision.

As Planner/GIS Coordinator for the Berkeley County Planning Commission in Martinsburg, West Virginia, reviewed development plans to ensure compliance with codes and ordinances, managed the GIS for Berkeley County, and educated the community through meetings and public forums.

Managed regional programs in collaboration with local, state, federal, and nongovernmental organizations to meet Clean Water Act and Clean Air Act responsibilities.

Assisted local governments in the development of policies to mitigate and reduce pollution and other natural hazards, such as flooding.

Facilitated comprehensive and strategic planning efforts that engaged diverse stakeholders to better capture and represent an entire community's vision.

Listened to the priorities of local governments and other partners to create action strategies for West Virginia's Chesapeake Bay Implementation Plan.

Activated strategies into on-the-ground action with projects that benefit local communities and Chesapeake Bay Program Goals.

Nurtured relationships across a variety of sectors, such as government, agriculture, conservation agencies, economic development authorities, utility districts, emergency managers, and special interest groups, by understanding their common goals and promoting environmental best management practices to complement each organization's mission and resolve their shared issues.

Assisted with brownfield redevelopment, community revitalization, and market analysis projects.

Oversaw the development of green infrastructure plans to leverage the ecological services that natural systems provide such as flood resiliency, source water protection, and energy savings.

Managed field installations, including tree plantings, rain gardens, and streambank stabilizations.

Orchestrated and tracked manure transport from Chesapeake watershed farms to abandoned mine lands that are being restored and repurposed for apple orchards in Appalachia.

Developed policies and regulations for local governments to mitigate and reduce pollution.

Designed "Green Collar" Workforce Development initiatives with area colleges to create professional opportunities for students in the natural resource and ecosystem restoration sectors.

Education

B.S., Urban and Regional Planning, Frostburg State University, Maryland. 2004.

Representative Publications

Pennington M. 2019. Comprehensive Economic Development Strategy, 2019-2023. Prepared for the Eastern Panhandle Planning and Development Council (Region 9).

Pennington M. 2017. Town of Bath Comprehensive Plan. Prepared for the Town of Bath, West Virginia.

Pennington M et al. 2019 Chesapeake Bay Watershed Implementation Plan, Phase III. Prepared for the W. Va. Department of Environmental Protection and U.S. Environmental Protection Agency Chesapeake Bay Program.

Josh Saville

Project Scientist

10624 Appalachian Highway
Davis, WV 26260

304.292.2450

www.downstreamstrategies.com
jsaville@downstreamstrategies.com

Profile

Mr. Saville brings a wealth of field experience and training to support a variety of stream and wetland restoration projects. He has over 10 years of experience in hydrology-related field work, including surveying (GPS, theodolite, level), sediment sampling, riparian and wetland vegetation inventory, stream and groundwater monitoring, chemical/biological monitoring, habitat assessment, and stressor evaluation. He is an experienced equipment operator having completed several stream and wetland restoration projects in addition to building miles of trails.

Skills and Experience

Oversaw construction on a 4000-foot trout habitat enhancement project on Big Run in the Savage River watershed, Maryland's only fully interconnected brook trout system. Oversaw construction on Beaver Creek, a tributary to the Blackwater River in Davis, WV; this project involved the removal of an old, failed dam and installation of log vanes and woody debris to enhance stream habitat.

Worked as an equipment operator and provided project oversight at Canaan Valley State Park for a 2.7-acre wetland creation and 1.4-acre wetland enhancement project to mitigate wetland impacts from a wastewater treatment facility constructed nearby.

Identified and prioritized stream restoration sites on the Gandy Creek in Randolph County, WV. Provided construction oversight, worked as an equipment operator, and assisted with planting and installation of bioengineering features. The project restored 5,000 feet of stream and created and enhanced wetlands.

Participated in a field crew that assessed and surveyed stream conditions in the Tomlinson Run watershed in Hancock County, WV and in the Lower Dempsey Creek watershed in Logan County, WV. Collected field data to measure the physical, chemical, and biological integrity of over 10 miles of stream. Oversaw construction for stream and wetland building and mine road decommissioning. The projects restored 10 miles of stream, reestablished two miles of stream, rehabilitated 26 acres of wetland, and decommissioned 25 miles of old mining roads.

Identified and prioritized ecological restoration sites on the Mower Tract in the Monongahela National Forest. Operated equipment for road decommissioning, strip mine bench decompaction, wetland enhancement, and stream restoration activities. The project restored 3,500 feet of stream, enhanced four acres of wetland, and decompacted 126 acres of mine lands.

Participated in a field crew that assessed and surveyed existing stream conditions and as-built conditions on three tributaries of the Upper Shavers Fork River. The projects restored 520 feet of stream and reconnected 3.7 miles of upstream habitat.

Participated in a field crew that assessed and surveyed existing stream conditions on Tuscarora Creek in Berkeley County, WV. Oversaw construction and assisted with planting and installation of bioengineering. The project restored 800 feet of stream and reconnected 16.7 miles of upstream habitat.

Worked as an equipment operator to restore approximately 800 feet of eroding streambanks on Mill Creek in Berkeley County, WV. The project included planting and installing bioengineering features.

Participated in a field crew that assessed and surveyed existing stream and as-built conditions for a restoration project on the Savage River in Garrett County, MD. Oversaw construction and assisted with planting and installation of bioengineering features.

Planned road-to-trail conversions on 10 miles of disused forest roads and completed construction of sustainable trails on the Monongahela National Forest.

Worked with communities, schools, and volunteer groups in the planning and design of over 17 miles of multi-use trails throughout West Virginia.

Education

B.A., Liberal Arts, West Virginia University, 1998. Emphasis on environmental science.

Wildland Hydrology through Level III, Assessment and Analysis of Stream Channels and Habitats, and EPA Rapid Bioassessment Approach.

Will Postlethwait

Staff Scientist

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Morgantown, WV 26508

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304.322.4598 (o)

www.downstreamstrategies.com
wpostlethwait@downstreamstrategies.com



Profile

Mr. Postlethwait is a stream restoration specialist at Downstream Strategies with over 17 years of experience. He works with watershed groups, state and federal agencies and private sector clients to identify restoration sites, raise funds and implement projects. He is skilled in stream channel, bed, bank and stability assessment, as well as stream and wetland habitat assessment, he designs stream and wetland restoration projects, develops mitigation plans and permits, and has overseen numerous projects through the construction and monitoring phase.

Skills and Experience

Skilled in technical field assessment procedures, including stream bed, bank, and riparian stability assessment and stream and wetland habitat assessments.

Experienced in designing stream and wetland restoration projects and developing mitigation plans and permits.

Has overseen numerous projects through the construction and monitoring phases.

Experienced in heavy equipment operation for projects, including wetland creation, bank stabilization, stream restoration, and road decommissioning.

Trained in GIS, site evaluation, and surveying with total station and GPS-RTK systems.

Assisted in field training for Wildland Hydrology courses as well as other courses offered through Canaan Valley Institute.

Trainings and Certifications

Stream Restoration Using Large Wood Materials. (Trout Unlimited, U.S. Forest Service) 2014.

Planning Hydrology, Vegetation, and Soils in Constructed Wetlands. (Penn State University) 2014.

Wetland Delineation. (U.S. Army Corps of Engineers) 2013.

AutoCAD Use for Stream Restoration and Monitoring. (University of Kentucky) 2007.

River Assessment and Monitoring, Level III. (David Rosgen) 2006.

River Restoration and Natural Channel Design, Level IV. (David Rosgen) 2006.

Fluvial Geomorphology for Engineers, Level I (E). (Richard Hey) 2005.

River Morphology and Applications, Level II. (David Rosgen) 2005.

Fluvial Geomorphology, Level I. (David Rosgen) 2004.

Education

B.S., Civil Engineering Technology, Fairmont State University, 2005. Emphasis on Safety.

B.S., Architectural Engineering Technology, Fairmont State University, 2001.

A.S., Civil Engineering Technology, Fairmont State University, 2001.