EJJI

our community, our story

For the Consideration of:

The Mid-Atlantic Panel on Aquatic Invasive Species

Enhancing Community Engagement and Science Communication in Baltimore

The Environmental Justice Journalism Initiative (EJJI) is submitting a request for $38,000 to enhance emerging invasive species programs and events in the urban waterways of Baltimore City. EJJI will use environmental science programs and data to communicate to local, and often underserved, communities about the opportunities for engagement, education, and behavioral change that invasive species mitigation can provide for a healthier ecosystem in Baltimore City.

For the duration of 10/1/2025 through 9/31/2026

The Principal Investigators, responsible for research administration, contracts, and reporting:

Primary:

Donzell Brown Jr., Executive Director of The Environmental Justice Journalism Initiative

Donzell@ejji.org

240-388-0761

Additionally:

Veronica Lucchese Environmental Science Program Manager, 3rd Year PhD Student and NOAA-LMRCSC Fellow II

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Enhancing Community Engagement and Science Communication in Baltimore

The Environmental Justice Journalism Initiative (EJJI) seeks funding to support a graduate student or postdoctoral researcher who will enhance aquatic invasive species (AIS) data collection, community engagement, and management strategies in the Baltimore area of the Patapsco River. This project builds on lessons from the 2024 pilot season of EJJI's Reel Rewards program, an invasive fish bounty program which revealed significant gaps in existing AIS catch data and population estimates.

Invasive species, such as northern snakehead, blue catfish, and flathead catfish, threaten the Chesapeake Bay's ecosystem and economy, outcompeting native species like blue crabs and striped bass. However, existing data on their populations in Baltimore's Patapsco River is unreliable, making it difficult to assess the true extent of the problem. The researcher will develop standardized tools for tracking AIS landings, estimating populations, and measuring removal impact. By collaborating with Coastal Conservation Association (CCA) of Maryland's Great Chesapeake Invasive Count and University of Maryland Center for Environmental Science - Integration and Application Network (UMCES-IAN) data scientists, this project will integrate community-driven conservation with scientific research.

In addition to generating AIS population data and management recommendations, the researcher will strengthen angler participation across diverse fishing methods and demographics. They will implement targeted outreach strategies to engage the community, enhance public awareness of AIS threats, and promote sustainable fishing practices. Outreach efforts will include developing educational materials, coordinating with bowfishermen to refine removal strategies, and presenting findings to key stakeholders.

The project will contribute to regional AIS management efforts by establishing replicable data collection and communication models for use beyond Baltimore. By aligning with local, state, and federal initiatives, including the Mid-Atlantic Panel on Aquatic Invasive Species, this work will inform policy recommendations and enhance collaborative approaches to AIS mitigation.

Enhancing Community Engagement and Science Communication in Baltimore

Project Description

The Environmental Justice Journalism Initiative (EJJI) proposes a collaborative project in partnership with the University of Maryland Center for Environmental Science's Integration and Application Network (UMCES-IAN) to address the spread of aquatic invasive species (AIS) and improve community engagement in Baltimore's Middle Branch Harbor.

This initiative builds on EJJI's previous work with Reel Rewards, which successfully engaged local anglers in removing invasive fish species while fostering community-driven environmental stewardship. With funding from MAPAIS, this project will support a graduate student or postdoctoral researcher who will develop and implement innovative AIS management strategies through research, public engagement, and science communication.

As an organization founded and based in Baltimore – a city with deep ties to the Chesapeake Bay – EJJI focuses much of our work on issues related to our waterways, including equitable Bay access, clean air and water, and the reduction of aquatic invasive species.

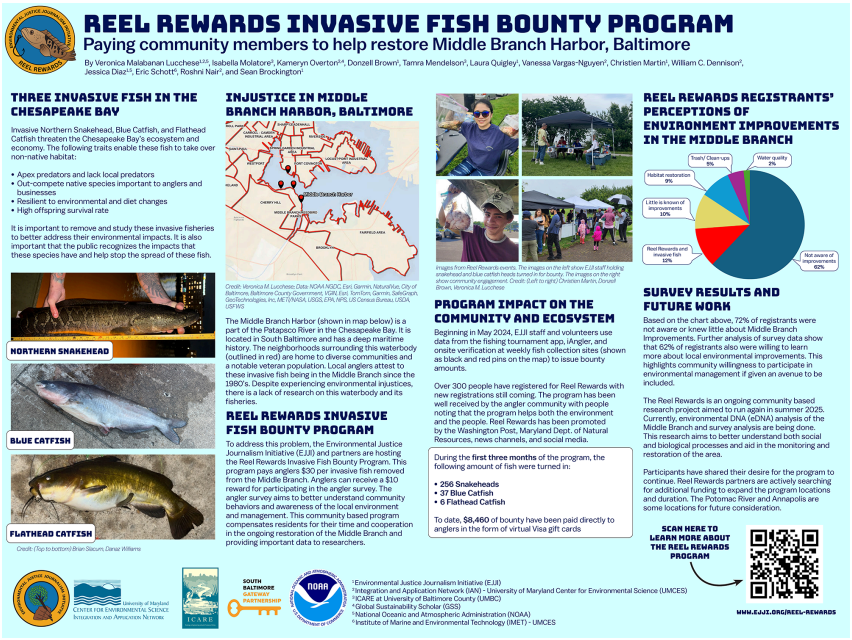
EJJI hosts a marina site at the Middle Branch that facilitates research on oysters and water quality through partnerships with SERC, Johns Hopkins, UMBC ICARE, IAN UMCES, and IMET. In addition, EJJI has partnered with various organizations, universities, and community leaders to implement internships and fellowships related to the environment.

Current environmental projects include water quality testing in partnership with SERC's Chesapeake Water Watch program; air quality monitoring in at-risk communities in partnership with SERC; Baltimore's second annual Latino Conservation Week event; water testing and oyster research with IMET; and hands-on science projects with Baltimore City school groups.

In the past year, EJJI has had great success with the Reel Rewards program. Funded by South Baltimore Gateway Partnership (SBGP) and the National Oceanic and Atmospheric Administration (NOAA), this innovative bounty program incentivizes fishers to remove invasive fish species from the Middle Branch of the Patapsco River. During its 2024 pilot program, over 300 fishers participated, removing over 300 invasive fish and receiving a total of $8,640 in monetary incentives. This pilot not only aided in

environmental restoration but also contributed to scientific research by providing survey results for one graduate student's masters thesis and another's PhD dissertation.

In our journalism branch, EJJI is telling the stories of overlooked communities. Our journalism and film projects allow communities to speak for themselves. Examples include our Baltimore Angler Stories series and numerous short films. Each year, EJJI also mentors several high school and college students through the process of creating stories about the environment.



Benefits or Results Expected

Invasive Northern Snakehead, Blue Catfish, and Flathead Catfish threaten the Chesapeake Bay's ecosystem and economy. Their resiliency, reproduction, and lack of native competitors allow these invasive, apex predators to take over bay habitat.

These 3 AIS threaten the economy and ecosystems reliant on important native species like the blue crab and striped bass. Removing and studying these invasive fish enables management to more effectively deal with the spread and its impacts. It is also important that the public is informed about the impacts that these species have and are engaged to help stop the spread of these fish.

Due to the logical challenges of fish surveying in the Patapsco River, catch data is the most feasible option to calculate population estimates for this region. Currently, there is a lack of reliable catch data and population estimates for these AIS, particularly in the Baltimore area. EJJI's first year of hosting Reel Rewards revealed that pre-existing data sources do not capture the true extent of AIS problems in Baltimore's waters. Previously, the Coastal Conservation Association (CCA) of Maryland's Great Chesapeake Invasive Count was one of the only recreational AIS bounty and removal programs. 2024 Reel Rewards landings surpassed CCA's records in the Patapsco river by 6300% for snakehead landings alone. Only running for 3 months, the Reel Rewards program highlights how much is unknown about the true population density of AIS in Baltimore's water.

The Project

EJJI's proposal seeks funding for a researcher to enhance AIS catch and population analyses while expanding community engagement and awareness. This position will address gaps identified during our 2024 pilot season of the Reel Rewards program and build on its successes.

The proposed researcher will support AIS removal and engagement through the Reel Rewards program by expanding participation with anglers from all demographics and methods, and creating replicable monitoring tools such as catch and population estimates as well as metrics on community needs. Additionally, they will strengthen relationships with previously engaged anglers such as bow-fishermen who have developed an extremely efficient harvesting method throughout the 2024 Reel Rewards season. Lastly, this position will generate management recommendations and communications to better inform local and regional management.

A key component of this project is improving the accuracy and consistency of aquatic invasive species population estimates and catch data in the Baltimore area of the Patapsco River. Current data on AIS populations in this area is unreliable, making it difficult to assess the true extent of the problem. Improving community participation and AIS landings will offer more reliable data to base population estimates. Using population dynamics theory and coding methods, the researcher will develop replicable data monitoring tools that allow for more precise AIS population tracking and removal impact assessments.

Working with CCA's Great Chesapeake Invasive Count and UMCES-IAN data scientists, this research position will have access to tools from both academic and non-profit sectors. These efforts will not only improve understanding of AIS dynamics but will also provide a foundation for more effective strategies to address prevention and areas of emerging invasion.

Outreach Plan

Public understanding and compliance is a critical factor in successful AIS management, particularly in urban waterways like the Patapsco River. This project will work to expand angler involvement across a broad range of demographics and fishing methods. The researcher will implement targeted outreach strategies to engage diverse fishing communities. Additionally, the researcher will develop and expand on existing science communication techniques to raise awareness about AIS issues, helping the public understand the ecological and economic consequences of invasive species.

These monitoring and communication tools and best practices will be designed for replication in other Mid-Atlantic regions, allowing for broader application beyond the Middle Branch Harbor. By establishing clear, evidence-based management strategies, this initiative will contribute to regional efforts to combat AIS, supporting the mission of

the Mid-Atlantic Panel on Aquatic Invasive Species and serving as a model for community-driven invasive species management.

Project Timeline

In addition to MAPAIS, EJJI and its partners are seeking additional funding from the South Baltimore Gateway Partnership (SBGP), the Abell Foundation, the Chesapeake Bay Foundation, and others to support this research position in perpetuity. Project deliverables for this project are as follows:

- Development of outreach and educational materials (i.e. videos, printable content, and presentations) for Baltimore schools and communities to help:
    - Identify blue catfish, flathead catfish, and snakeheads,
    - Efficiently target blue catfish, flathead catfish, and snakeheads in the Patapsco River, and
    - Prevent the introduction and spread of the 3 AIS.
- Coordination with bowfishermen and other local anglers to increase efficient and innovative removal of the 3 AIS.
- Create recommendations for Maryland state agencies such as the Department of Natural Resources based on program analysis.
- Annual progress reports and final report upon project completion.
- Presentation of final results at:
    - MAPAIS meeting
    - Chesapeake Bay and Watershed Report Card Listening Sessions
    - Institute of Marine and Environmental Technology Seminar Series
    - Baltimore Scientific and Technology Advisory Committee
    - Community Agriculture Outreach Day with Patawomeck Tribe of Virginia
    - NOAA's Invasive Catfish Workgroup Meeting

Activity	Date	Deliverable(s)
Develop outreach and educational materials	10/2025 - 04/2026	Videos (3), Pamphlet (3), Presentation documents (1-2)
Disseminate outreach materials to community meetings, schools, presentations	03/2026 - 09/2026	Completed presentations (6+)
Coordinate efficient and innovative AIS removal	03/2026 - 07/2026	Set of replicable removal guidelines
Create recommendations for MD State agencies	06/2026 - 09/2026	Set of recommendations based on Reel Rewards results

Budget Table

Description	Charge	Hours Per Week	Duration	Monthly Cost	Annual Cost
Salaries					
Environmental Researcher	$17/hr	20	1 year	$1,360	$16,320
Content Development	$15/hr	10	1 year	$600	$7,200
Community Outreach Coordination	$15/hr	10	1 year	$600	$7,200
Materials					
Printable materials (signs, pamphlets, infographics, educational sheets)	$500	n/a	1 year	n/a	$500
Fringe					
Insurance, administration, project management	13%	n/a	1 year	n/a	$4,058.60
Total					$35,278.60

Budget Narrative

Environmental Researcher

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Content Development

EJJI's staff will be working with the environmental research sector, as well as local communities using a multimedia strategy. These communications will encourage local communities to be active participants in AIS management, understand the effect of AIS on the health of their local waterways, and show how they can be part of the solution. In collaboration with EJJI's journalism branch, the proposed graduate student or postdoctoral researcher will be creating content via articles, infographics, videos, pamphlets, and presentations.

Community Outreach

Public understanding and compliance is a critical factor in successful AIS management, particularly in urban waterways like the Patapsco River. This project will work to expand angler involvement across a broad range of demographics and fishing methods. The researcher will implement targeted outreach strategies to engage diverse fishing communities. Additionally, the researcher will develop and expand on existing science communication techniques to raise awareness about AIS issues, helping the public understand the ecological and economic consequences of invasive species.

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Materials

Through the grant cycle, the graduate student or postdoctoral researcher will present their AIS data findings, as well as the educational materials they develop, to the public in the form of public signs, printed pamphlets and/or infographics, educational sheets,

and other printable materials to be determined by needs that arise during the execution of the project.

Fringe

EJJI is requesting a 13% fringe to cover insurances, administration costs, and project management.

Donzell Brown, Jr.

Community Organizer | Baltimore, Maryland | (240) 388–0761 | Donzell@EJJI.org

SUMMARY

Over 20 years of political, community and executive experience working in and with leadership to accomplish ambitious goals for the common good of the community, the City of Baltimore, and the Nation. From Capitol Hill to the streets of Baltimore; have organized, fundraised, created coalitions and ultimately been a positive influence on the greater good of citizens.

As an active participant in many local, national issues and political campaigns; I've successfully been able to gain much knowledge through connections, honesty, and hard work.

EXPERIENCE

ENVIRONMENTAL JUSTICE JOURNALIST INITIATIVE – EJJI

Executive Director – 2020 to Present

Chief executive in charge of organization operations, development, and implementation of programming for the advancement of Environmental Justice initiatives through storytelling. Creating coalitions understanding for the science community, local communities and decision makers to effect positive change for the Environments and Justice. Enhancing the opportunity for youth to get engaged in areas from advocacy to workforce development. Conduct workshops, public speaking engagements and special events. Mentorship for young people to encourage them to be ambitious in professional environments that they are often minorities.

MARYLAND 43RD DISTRICT OF SENATOR MARY WASHINGTON

Legislative Liaison – 2022–2023

Assisted Senator Washington with Policy development, community engagement and legislative affairs. Collaborated with advocates and subject matter specialist on the development of Legislation.

STRENGTH TO LOVE II URBAN FARM AND RE–ENTRY WORKFORCE DEVELOPMENT

Outreach Coordinator December 2015 – August 2016

Organized outreach to government and elected officials, other urban farmer partnerships, environmental groups and leaders focused on reentry programs and Urban farming.

CAMPAIGN OF ELIZABETH EMBRY FOR MAYOR OF BALTIMORE

Political Director December 2015 – April 2016

Developed campaign policy, developing press targets and messaging. Managed staff in the implementation of the campaign objectives.

RED CONSULTANTS

Executive Vice President – March 2004 – November 2011

Security Officer, and in charge of Business Development of Intelligence Operations, Cyber Security, and Intelligence Analyst

Donzell Brown, Jr.

EDUCATION

St. Vincent College. Latrobe, Pennsylvania

Bachelors in Political Science August 1999 – December 2002

Emphasis on political philosophy, economics, public policy, and ethics.

Oxford University, New College. Oxford, England

Jurisprudence Studies December 2002– June 2003

Emphasis on Jurisprudence with a secondary in ancient and modern political philosophy

ORGANIZATIONS AND HIGHLIGHTS

Mayor's Sustainability Commission – Commissioner 2016 – Present

Advises the City of Baltimore on Sustainability issues, policy, and equality.

Intersection of Change – Member of the Board of 2004 – 2015

Oxford Union – Member Alumnus – 2003 – Present

VERONICA MALABANAN LUCCHESE| VLUCCHESE@UMCES.EDU | 718-483-5814 |
LINKEDIN, INSTAGRAM, YOUTUBE, & WEBSITE

Doctor of Philosophy in Marine-Estuarine Environmental Science (MEES), University of Maryland Center for Environmental Science (UMCES) **GPA: 3.8** — EXPECTED: MAY 2027

Bachelor of Arts in Marine Affairs, Geology, & Anthropology; Minor in Art; Enrichment in Journalism, Film Making & Photography, University of Miami, Rosenstiel School of Marine, Atmospheric, and Earth Science (RSMAES) **GPA: 3.6** — MAY 2020

Environmental Science Programs Manager, Environmental Justice Journalism Initiative (EJJI) — **2024**
- Organize community members and environmental organizations to execute applied science projects including the Reel Rewards Invasive Fish Bounty Program.
- Create science and environmental justice communications including blogs and videos.

Fellow II, National Oceanic Atmospheric Administration (NOAA)-Living Marine Resources Cooperative Science Center (LMRCSC) at UMCES — **2023- Present**
- Use social network analysis to address inequality in fisheries management.
- Contribute to NOAA mission and improve diversity, equity, & inclusion in management.

Graduate Research Assistant, Integrated Application Network (IAN)-UMCES — **2022- 2024**
- Data analysis & visualization for the Chesapeake Bay Report Card & COAST Card.
- Addresses engagement & environmental justice through social media content, strategic partnerships, and research with international & local organizations.
- Grant writing, program creation, program execution, & data collection.

Graduate Research Assistant, Office of Education-UMCES — **2023**
- Website & content creation to facilitate student & faculty access to resources.
- Survey creation, data collection, & data analysis to improve course outcomes.

Ecology & Evolution Laboratory Teaching Assistant, University of Maryland at College Park — **2022**
- Lead lectures based on procedure, data analysis & visualization, & scientific method.
- Presentation making, grading, & classroom management.

Outreach & Communication Specialist, Southeast Fisheries Science Center (SEFSC) & Northeast Fisheries Science Center (NEFSC) at NOAA — **2019- 2022**
- Designs & maintains internal & external content and partnerships.

Geology Technician, New Jersey Department of Environmental Protection — **2021-2022**

Economic Research Assistant, SEFSC at NOAA — **2019- 2020**

Publications

Lucchese, V. M., Vargas-Nguyen, V., Dennison, W. C., Vissering, C., Amadi, J., Matthews, M., Jacobs, G., Komolafe, B., Fairfield, K., Zais, A., Seddon, H., and Jalkowski, S., 2024, "Environmental Management of Baltimore Harbor: Learning from the Past, Planning for the Future". IAN Press. ISBN 978-0-9822305-7-2 (13), ISBN 0-9822305-7-5 (10).

Lucchese V.M., Andorsky Y., Martin C.M., 2024, "EJJI Reel Rewards Recap 2024", EJJI,

Dreiss A., Azarnivand A.R., Hildebrand A., Ahmadi S.F.P., Ali S.S., Lucchese V.M., Zhang Q., Lapham L.L., Woodland R.J., Harris L., Testa J.M., 2024, "Controls on Oxygen Variability and Depletion in the Patuxent River Estuary". Estuaries and Coasts 47, 2306–2323 (2024). https://doi.org/10.1007/s12237-024-01390-3

Lucchese V.M., Martin C.A., 2024, "Baltimore Angler Stories: Danaz Williams", EJJI

Lucchese V.M., Martin C.A., 2024, "Managing the Potomac: Featuring the Patawomeck Tribe of Virginia", UMCES-IAN

Lucchese V.M., 2024, "Indigenous ideals and shaping environmental movements", UMCES-IAN, https://ian.umces.edu/blog/indigenous-ideals-and-shaping-environmental-movements/

Lucchese V.M., 2023, "From Brooklyn's Waterways to Chesapeake Bay: A Journey of Environmental Justice", Environmental Justice Journalism Initiative

Lucchese V.M., 2022, "Disrupting Western Bias: Social Media, an Indigenous Tool", UMCES-IAN,

Lucchese V.M., 2022, "How Environmental DNA Can Help our Ocean", NOAA Fisheries,

Lucchese V.M., 2022, "Sandy Hook 101", NOAA Fisheries,

Lucchese V.M., 2021, "NOAA SEFSC: We Are Here for You", NOAA Fisheries,

Cresci A., Paris C.B., Browman H.I., Skiftesvik A.B., Shema S., Bjelland R., Durif C.M.F., Foretich M., Di Persia C., Lucchese V.M., Vikebø F.B., Sørhus E., "Effects of Exposure to Low Concentrations of Oil on the Expression of Cytochrome P4501a & Routine Swimming Speed of Atlantic Haddock (Melanogrammus aeglefinus) Larvae In Situ.", 2020. Environ Sci Technol. 2020 3;54(21):13879-13887. doi: 10.1021/acs.est.0c04889

Presentations

Lucchese V.M., "Unlocking Connections: How Social Networks Shape the Future of Chesapeake Bay", Speaker Series for the Ingenuity Project at Baltimore Polytechnic Institute. November 2024. Baltimore, MD

Lucchese V.M., Vargas-Nguyen V., Dennison W., "Evaluating Social Networks in Chesapeake Bay: Tackling Management Inequality".
- MEES Colloquium at UMCES- Horn Point Lab (HPL). October 25, 2024. Cambridge, MD. (Link)
- Chesapeake Global Collaboratory (CGC) at UMCES-Institute for Marine and Environmental Technology (IMET). October 9, 2024. Baltimore, MD.

Lucchese V.M., "Environmental Journalism and Data". Baltimore Forest Science Internship by the Smithsonian Environmental Research Center. Baltimore, MD.
- September 28, 2024
- May 18, 2024
- February 24, 2024

Lucchese V.M., Vargas-Nguyen V., Dennison W., "Tackling Inequality in the Potomac River Watershed Using Social Network Analysis".
- American Fisheries Society (AFS). September 16, 2024. Honolulu, HI. (Link)
- COAST Card Social Network Analysis Meeting. May 8, 2024.

Lucchese V.M., Vargas-Nguyen V., Dennison W., Brown M., 2024. "Tackling Inequity: Web Scraping for Social Network Analysis on the Patuxent River Watershed".
- Chesapeake Community Research Symposium 2024. June 12, 2024. Annapolis, MD
- MEES Colloquium. March 22, 2024. Kent Island, MD. (Link)
- COAST Card Special Topics Meeting. December 12, 2023. Baltimore, MD.
- CGC Summit. September 28, 2023. Baltimore, MD.

Lucchese V.M., Brown D., "Reel Rewards: Invasive Fish Bounty Program for the Middle Branch, Patapsco River". Reimagine Middle Branch Science and Technical Advisory Committee (STAC) Meeting. March 6, 2024. Baltimore, MD.

Lucchese, V. M., Molatore, I., Overton, K., Brown, D., Mendelson, T., Quigley, L., Vargas-Nguyen, V., Martin, C., Dennison, W. C., Diaz, J., Schott, E., 2024. "Reel Rewards Invasive Fish Bounty".
- MEES Colloquium at UMCES-HPL. October 25, 2024. Cambridge, MD. (Link)
- NOAA-LMRCSC Annual Assembly at UMCES-IMET. October 19, 2024. Baltimore, MD.
- Higher Ed Climate Action Plan Launch by the Aspen Institute at University of Maryland. August 1, 2024. College Park, MD

Session Organizer

"Offshore Wind, Fish, and Fisheries: Emerging Knowledge and Applications" Session and Career Panel. AFS., September 18, 2024. Honolulu, HI.

"Co-designing solutions to support community resilience in the Chesapeake Bay Watershed". Chesapeake Community Research Symposium 2024. June 12, 2024. Annapolis, MD (Link)

"Internet Investigators: Journalism in the Digital Age". ShoreRivers Youth Environmental Action Summit at Chesapeake College. March 15, 2024. Wye Mills, MD.

Awards & Certificates

MEES Graduate Fund – Menzer Awardee, UMCES **2024**

Social and Behavioral Responsible Conduct of Research Certification, CITI Program **2024**

Green Space Data Challenge Physical Environment 1st Place, Georgetown University McCourt School of Public Policy (Link) **2023**

Thesis Departmental Honors, RSMAES at the University of Miami **2019**

Florida Outdoor Writers Association Scholarship, Florida Outdoor Writer's Association **2019**