Empowering Future Environmental Public Health Professionals: A Deep Dive Into the Expanded National Environmental Public Health Internship Program

The environmental public health workforce plays a crucial role in safeguarding the well-being of communities. These dedicated professionals lead efforts to assess and manage risks, ensure safe water and sanitation, support the prevention and control of communicable diseases, ensure food safety, conduct vector control, and contribute to emergency preparedness and response efforts (Gerding et al., 2019). In recent years, however, the environmental public health workforce has faced an alarming decline in both numbers and resources (National Association of County and City Health Officials, 2019). This decline has serious implications for the quality and coverage of environmental public health services. Responding to a growing number of emergencies and managing routine public health functions will be gravely challenging without an adequate workforce.

One way to address this challenge is to develop and support an internship program that serves as a pipeline from environmental health education to practice (Bouye et al., 2016). Internship programs play a crucial role in supporting the transition from the classroom to professional careers in environmental public health. Internships provide students with valuable practical experience and the opportunity to apply theoretical knowledge in real-world settings. These programs offer opportunities to develop essential skills, expand professional networks, and gain exposure to different areas of public health, which ultimately enhance the readiness of students to enter the workforce (Ryan & Hall, 2022). Through internships, aspiring environmental public health professionals can close the divide between education and practice.

The National Environmental Health Association (NEHA) has partnered with the National Center for Environmental Health within the Centers for Disease Control and Prevention (CDC) to offer the National Environmental Public Health Internship Program (NEPHIP) to support the pipeline by offering environmental health students the opportunity to partake in a hands-on environmental public health internship experience. This CDC-funded workforce initiative helps environmental public health students gain valuable work experience, develop meaningful professional relationships, and introduce students to the diverse and rewarding career opportunities that exist in state, tribal, local, and territorial (STLT) governmental public health agencies following graduation.

Through NEPHIP, we collaborate with environmental public health academic programs that are accredited through the National Environmental Health Science and Protection Accreditation Council (EHAC) to place students with qualified public health agencies for a 400-hr paid internship that offers hands-on environmental public health experience at STLT public health agencies. The internship program also enables students to gain credit hours for coursework, partake in an independent project for their portfolio, network with environmental public health professionals for career guidance and opportunities, and find a passion for a specific direction in environmental health. NEPHIP benefits both students and public health agencies. For students, it provides hands-on experience, exposure to real-world challenges, and the opportunity to apply their knowledge in a professional setting, which enhances their skills and employability. For public health agencies, the program offers access to fresh perspectives, a pool of talented individuals, and the chance to cultivate a pipeline of skilled professionals who can contribute to the mission of their agency and address public health needs effectively.

Widening the Horizons

In 2022, we introduced an expanded and revised version of NEPHIP, aiming to provide additional benefits and opportunities for professional and career development. The enhanced program now offers interns the flexibility to choose from multiple internship cohorts throughout the year, including summer, fall, or spring, in contrast to exclusively offering summer internships. Additionally, the number of student interns selected from EHAC-accredited institutions per academic year has also increased, providing support for up to 50 individuals.

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– David Dyjack, DrPH, CIH, Executive Director, National Environmental Health Association
The expansion of NEPHIP encourages interns to consider projects focused on imperative issues such as climate change, health equity, sustainability, and environmental justice. The program was revised to increase diversity among interns and participating host sites and environmental health programs within STLT public health agencies. NEPHIP now offers valuable professional career mentorship sessions, where student interns can engage with other environmental health professionals working in STLT public health agencies outside of their internship host site. In addition, the interns now have the opportunity to attend a Virtual Career Fair.

The augmented program has strategically incorporated our Annual Educational Conference (AEC) & Exhibition into the revised model for NEPHIP. Interns are now offered free virtual registration to the AEC, a complimentary professional development preconference workshop, and select interns are offered travel scholarships to attend the AEC in person. Furthermore, interns are given a 1-year NEHA student membership that provides them with access to valuable resources, a 1-year subscription to the Journal of Environmental Health, and networking opportunities.

The revised program offers enhanced coordination and evaluation support to strengthen experiential learning outcomes. Furthermore, participating host programs are offered financial support packages to cover expenses associated with hosting an intern. Overall, these revisions were made to further bolster NEPHIP and bridge the gap between education and practice, contributing to a seamless transition and empowering aspiring environmental public health professionals to make meaningful contributions to the field. As Dr. David Dyjack, NEHA executive director, put it: “Like striped caterpillars that metamorphize into beautiful monarch butterflies, NEPHIP is crafted to accelerate the development of environmental public health students from learners into thriving, effective professionals.”

**Embracing Imperative Issues as Project Topics**

NEPHIP interns are encouraged to explore climate change, health equity, sustainability, and environmental justice within their independent projects. These topics encapsulate the defining issues of our global landscape. Climate change—with its escalating impacts on ecological systems, natural resources, and human health—demands urgent attention (Weiskopf et al., 2020). Dr. Jesse Bliss, director of Program and Partnership Development at NEHA, underlines the significance of these focus areas by stating, “Training and supporting our environmental public health pipeline for climate change, environmental justice, health disparities, and sustainability is critical to our nation’s health and safety.”

By integrating these vital concerns into NEPHIP internships, aspiring environmental public health professionals gain invaluable exposure to the multifaceted challenges presented by climate change and become equipped with the necessary knowledge and skills to effectively address its ramifications. Furthermore, the emphasis on health equity is pivotal in mitigating the disparities exacerbated by climate change. Historically, marginalized communities often bear the brunt of environmental hazards and are disproportionately affected by the adverse consequences of climate change (Boyd et al., 2021). A report from the U.S. Environmental Protection Agency (U.S. EPA, 2021) elucidates the ramifications of climate change on socially vulnerable populations within the U.S., people of color and Indigenous communities exhibit a greater propensity to bear the burden of adverse climate effects. These effects include the exacerbation of air quality degradation, the deleterious consequences of extreme temperature on well-being and productivity, and the detrimental effects of coastal and inland flooding on health and property (U.S. EPA, 2021). Incorporating health equity as a focal point within NEPHIP internships fosters an understanding of these disparities and enables interns to devise strategies that promote equitable access to environmental resources, healthcare services, and resilience-building initiatives. By doing so, interns contribute to dismantling the systemic inequities that worsen the impacts of climate change on vulnerable populations.

Sustainability, as a guiding principle, reinforces the imperative of responsible resource management and the development of resilient systems that can adapt to changing environmental conditions (Roostaie et al., 2019). Encouraging interns to engage with sustainability-related projects instills an ethos of ecological stewardship and innovation, ensuring the long-term viability of public health interventions in the face of a rapidly evolving climate.

Lastly, integrating environmental justice into NEPHIP internships acknowledges the intersectionality between environmental concerns, social justice, and public health outcomes. By examining the disproportionate burdens borne by underserved communities and empowering interns to address these injustices, the internship program cultivates a generation of public health leaders committed to confronting the root causes of environmental inequities and advocating for policies and interventions that prioritize justice and inclusivity.

**Focusing on Diversity**

One of the key improvements in the program is the strengthened promotion and recruitment efforts, with a specific focus on increasing diversity and inclusion among interns. Environmental public health issues affect diverse communities differently. By ensuring a diverse workforce, we can better understand and address the unique challenges faced by various racial, ethnic, and socioeconomic groups (Harper, 2007). This focus promotes a more equitable distribution of resources, interventions, and policies that can effectively mitigate health disparities and promote environmental justice. We have demonstrated a strong commitment to prioritizing diversity among NEPHIP interns by actively seeking candidates from diverse geographic, racial, and ethnic backgrounds.

Under the expansion, NEPHIP now integrates revised diversity metrics into the appli-
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Offering Mentorship and Career Guidance

Under the expanded NEPHIP model, we launched the NEPHIP Career Mentorship Program. The mentorship program offers NEPHIP interns unparalleled opportunities for career development and guidance by connecting interns with experienced environmental health professionals employed in STLT public health agencies. The cornerstone of this mentorship program is the participation of professionals who have successfully completed our highly regarded Environmental Health Leadership Academy (EHLA). With its rigorous 12-month training program, EHLA equips graduates with a comprehensive skill set that encompasses management strategies, environmental health risk assessment, effective communication, community mobilization, equity advocacy, organizational infrastructure, evaluation and quality improvement, and performance management.

NEPHIP interns now have the exclusive opportunity to engage in career mentorship sessions with these accomplished EHLA graduates. The mentorship program focuses on offering timely and credible career advice, aiding interns in navigating the multifaceted field of environmental health, exploring diverse career paths, and keeping abreast of the evolving landscape of the profession. The mentorship sessions enable interns to tap into the rich knowledge and practical experiences of the EHLA graduates, who are eager to share their insight and expertise.

“The NEPHIP mentorship program helped me make meaningful connections and offered valuable career guidance,” stated Nikita Nunez, a spring 2023 NEPHIP intern. She added that being accepted into the mentorship program introduced her to many opportunities. She mentioned that the “mentors in this field were quite exceptional in providing real-life expectations and shared the educational insights and resources needed to become instruments within the environmental public health workforce.” Christopher Walker, NEHA senior program analyst, commented that “having access to EHLA graduates, who are recognized leaders in the environmental health community, provides our interns with a wealth of knowledge and guidance as they embark on their professional journeys.”

By connecting NEPHIP interns with these esteemed mentors, the program fosters the growth of professional networks within the environmental health community. Interns are encouraged to forge lasting connections, potentially identifying future mentors or collaborators who can offer ongoing support and guidance throughout their careers. Furthermore, the program empowers interns to gain practical skills while developing a profound understanding of the environmental health landscape from experienced professionals. This unique opportunity lets interns lay a solid foundation for their future careers, positioning them as the next generation of en-

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environmental health leaders. As the mentorship program unfolds, the positive impact it will instill on the careers of NEPHIP interns—and the broader environmental health community—is eagerly anticipated. With the guidance and mentorship of EHLA graduates, the interns are poised to make meaningful contributions to environmental public health initiatives across the nation.

In addition to the NEPHIP Career Mentorship Program, we also offer NEPHIP interns the opportunity to participate in a virtual career fair. The career fair aimed to support past and current NEPHIP interns by connecting them with STLT environmental public health agencies that are recruiting new talent. This direct interaction allowed the interns to showcase their skills, knowledge, and passion for environmental public health and make a lasting impression on prospective employers while increasing their chances of securing future employment within environmental public health.

Additional objectives of the career fair included offering a networking opportunity to participants and presenting an avenue for STLT environmental public health agencies to promote their work to potential recruits. The career fair provided interns with the opportunity to engage potential employers and gather valuable information about different environmental health roles, responsibilities, and career paths. This exposure helped the interns make informed decisions about their career trajectories and gain insight into the skills and qualifications sought by employers in the field.

The virtual career fair was successfully hosted in May 2023. The fair featured a variety of exhibitor booths and provided a diverse range of organizations and opportunities for NEPHIP interns. One student with a full-time job expressed satisfaction with the virtual format as it enabled her to attend during her lunch hour. Feedback from attendees highlighted the openness and interactive nature of the platform. Participants appreciated the freedom to engage with others at their own pace, fostering meaningful connections and networking opportunities. One intern expressed enthusiasm about applying for an open position that was highlighted during the career fair, indicating the tangible impact the event had on their career prospects. Samiah Elgazzar, a spring 2023 NEPHIP intern, commented that she made many connections at the career fair and is excited to see where those connections lead her.

**Professional Development and Networking at the NEHA AEC**

The integration of our AEC into the revised version of NEPHIP has been a pivotal step in maximizing the environmental public health learning experience of NEPHIP interns. This strategic integration has yielded several notable benefits that have empowered interns and equipped them with valuable skills and resources. Foremost, NEPHIP interns were offered complimentary registration to the AEC. The AEC serves as a platform for aspiring and experienced environmental public health professionals to expand their knowledge base, acquire industry insights, and develop a deeper understanding of the multifaceted challenges that face environmental health professionals. The complimentary registration granted interns access to a diverse array of educational sessions, workshops, and presentations delivered by esteemed experts in the environmental health field. By immersing themselves in this comprehensive learning environment, interns gained exposure to cutting-edge research, emerging trends, and innovative practices that shape the landscape of environmental health. The revised program also offered travel scholarships to 10 select interns to cover their travel costs to the AEC.

Additionally, the revised program offers NEPHIP interns with complimentary access to a preconference workshop specifically designed for professional development.

Meet Megan Gray-White, an exceptional undergraduate student at Colorado State University who is majoring in biomedical sciences with a concentration in environmental public health. Her passion for promoting community well-being has propelled her towards remarkable achievements, setting her on a path to make a lasting impact in the field.

During her academic journey, Gray-White completed a hybrid internship that combined both in-person and virtual experiences. This unique opportunity took place at the Broomfield Department of Public Health and Environment. Within this setting, she undertook a transformatively project that focused on developing a comprehensive written plan for a healthy homes program specific to the jurisdiction.

Impressed by Gray-White’s outstanding performance and dedication, the Broomfield Department of Public Health and Environment offered her a full-time position. This exciting opportunity allows Gray-White to further apply her skills and knowledge to drive positive change within the community she served during her internship.
In 2022, this workshop covered an array of pertinent topics, such as building effective resumes, seeking mentorship, understanding the importance of the Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS) credential and other environmental health credentials, delivering scientific presentations, and building a professional network. The workshop equipped interns with the practical skills and knowledge essential for their future careers in the environmental health field.

We also facilitated a virtual networking event exclusively for NEPHIP interns to help them connect with NEHA leaders, mentors, and affiliates. This networking opportunity provided a platform for interns to establish meaningful professional relationships, seek guidance from experienced practitioners, and expand their network within the environmental health community. Such connections proved instrumental in fostering mentorship, accessing future opportunities, and building a supportive community of like-minded professionals.

Sustained Support for Internship Work

Support to Interns

Under the revised version of NEPHIP, we provide enhanced coordination and evaluation support to interns, thereby strengthening the experiential learning outcomes of the program. Our staff play a vital role in assisting interns throughout their internship journey, such as helping them develop impactful presentations and publications based on the successful outcomes of their projects. This support ensures that interns are equipped with the necessary skills to effectively communicate their findings and contribute to the broader field of environmental health.

To further support the professional growth and development of NEPHIP interns, we offer a complimentary 1-year membership to our association. This membership grants interns access to an array of valuable resources exclusively available to our members. They gain the opportunity to participate in NEHA committees and engage in collaborative efforts to shape environmental health policies and practices. Moreover, interns gain access to the Journal of Environmental Health, a peer-reviewed publication tailored to the needs of researchers and practitioners in the field. This access enables interns to stay abreast of the latest research findings, emerging trends, and best practices.

Additionally, we provide interns with an extensive continuing professional education portfolio, offering more than 20,000 hours of e-learning opportunities. This comprehensive educational platform enables interns to enhance their knowledge and skills and ensures they remain up-to-date with the evolving landscape of environmental health. Furthermore, interns benefit from discounted registration fees for the AEC, our flagship event that offers unparalleled networking opportunities and exposure to cutting-edge advancements in the field. To facilitate ongoing communication and support, our exclusive newsletters keep interns informed about relevant trainings, funding opportunities, inclusion in national environmental public health workforce surveys, and upcoming events. These resources not only empower NEPHIP interns with the latest industry insights but also assist them in achieving their professional development goals.

Support to Participating Environmental Public Health Programs

As part of the revised version of NEPHIP, participating environmental public health program host sites receive financial support packages to alleviate the expenses associated with hosting an intern. This support aims to create a more sustainable and accessible internship experience for both the interns and the organizations involved. An exemplary instance of the positive impact of these financial support packages can be seen through the experience of the New Orleans Health Department, which hosted a virtual intern in fall 2022. With the assistance of the support package funds, the department was able to purchase a tablet specifically for the intern's mentors to use during virtual inspections (Photo 1). The financial package enabled the New Orleans Health Department to facilitate a comprehensive, immersive, and technologically adept virtual internship experience, despite the remote setting. For the intern, the opportunity to participate in virtual inspections using advanced technology was a vital experience and provided real-world skills and understanding that they could not have gained otherwise.

The tangible benefits of the support packages extended beyond the duration of the internship, leaving a lasting impact on the operations of the health departments. For instance, during a housing inspection of a multi-unit building, the tablet proved to be an asset. The intern's mentors, accompanied by a representative from the office of code enforcement, used the tablet to document and record the inspection process. The convenience and efficiency afforded by the tablet greatly enhanced the inspection experience, surpassing the traditional method of relying on paper forms and clipboards. The significance of this support package did not go unnoticed by the New Orleans Health Department and the individuals involved in the inspection. They expressed their sincere gratitude for the difference the tablet made in their work. In fact, the representative from the office of code enforcement even expressed a touch of envy, recognizing the benefits of using a tablet for inspections in contrast to the more cumbersome paper-based approach.

This example highlights the tangible impact of the financial support packages provided through the revised program. By facili-
tating the acquisition of necessary tools and resources, such as tablets, laptops, and sampling equipment, host sites can enhance the internship experience, promote efficiency, and improve overall work quality. The support truly makes a difference in empowering environmental health professionals to excel in their roles and contribute effectively to their respective organizations.

Conclusion
Our strategic enhancements to NEPHIP showcase a steadfast commitment to creating enriching experiences for interns and fostering growth within environmental public health programs. These developments offer interns helpful opportunities for professional growth, networking, and positive contributions to the field of environmental public health. By investing in the future of the environmental health workforce, we strive to safeguard community well-being and enhance collective responsiveness to public health challenges.

None of this work, however, would be possible without the active involvement of committed health departments and STLT public health agencies. Therefore, we encourage STLT public health agencies and environmental public health programs to take part in this transformative journey as a host site for NEPHIP. In our pursuit of environmental public health excellence, we remain steadfast in fostering this program and laying the groundwork for a resilient, adaptable, and diverse workforce. As we endeavor to shape the future of public health, we value the contributions of all our partners and stakeholders.

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Did You Know?
The National Environmental Public Health Internship Program (NEPHIP) is a 400-hr paid internship opportunity that links environmental health undergraduate and graduate students with funded internship placements at qualified environmental public health agencies. NEPHIP focuses on building the environmental health workforce by exposing students to firsthand environmental public health work and career opportunities. Student applications for the spring 2024 session are open and will close on October 9. Applications for environmental health agencies are always open and will be accepted on a rolling basis if positions are open and available. Learn more at www.neha.org/nephip.

References


