**Career Summary**

Highly qualified leader with more than six years experience in scientific research fields. Disciplined problems solver with excellent communication and analytical skills.

**Education and Positions**

|  |  |
| --- | --- |
| 2013 - 2018 | Bachelor of Science in Environmental Engineering  |
| Louisiana State University, Baton Rouge, Louisiana |
| *Thesis: Assessing the Impact of Urban Flooding on Vulnerable Populations in New Orleans using the Internet of Things* |
|  |  |
| 2010-2011 | Honors Graduate, United States Marine Corps Leadership Academy |
| Infantry Squad Leader Course, Camp Pendleton, California |
| *Curriculum focus: Leadership and poise during high stress situations. Emphasis on dynamic problem solving.* |
|  |  |
| 2014 - Present | Geospatial Scientist, Research Associate, Research Intern |
| The Water Institute of the Gulf, Baton Rouge, Louisiana |
| *Role requirements: Geospatial analysis, research, and narrative building for scientific communication. Administration of web GIS platforms and quality control of cartographic products.* |
|  |  |
| 2012 - 2013 | Process Technician |
| Jacobs Engineering, Exxon Refinery Alliance Group, Baton Rouge, Louisiana |
| *Role requirements: Intensive analytical research on major turnaround projects for Exxon. Upstream and downstream communication and ideation.*  |
|  |  |
| 2008-2012 | United State Marine Corps: Infantry Section Leader, Weapons Platoon Sergeant |
| 3rd Battalion, 4th Marine Regiment, Twentynine Palms, California |
| *Role requirements: Management and control of stressful situations. Command of section (15+ Marines) and platoon (45+ Marines) during consecutive combat deployments to Afghanistan.*  |

**Skills Resume**

|  |  |  |
| --- | --- | --- |
| Technical: | Software: | Extensive: ArcGIS Enterprise, ArcGIS Pro, ArcMap, QGIS |
| Proficient: Adobe Creative Suite, jamovi, MapInfo, MATLAB, OpenStreetMap, RStudio, SPSS |
|  |  |
| Programming Languages: | Extensive: SQL, Python |
| Proficient: MATLAB, R |
|  |  |
| Operating Systems: | Extensive: macOS, Windows |
|  |  |
| Modelling: | Extensive: ArcGIS Model Builder, HAZUS |
| Proficient: HEC-GeoHMS, HEC-RAS, SWMM |
|  |  |  |
| Methodological: | Cartographic development, geodata processing and visualization, hazard assessment, scientific graphic development, social vulnerability assessment, statistical analysis  |
|  |  |  |
| Interpersonal: | Autodidactic and detail-orientated team player. Dedicated worker willing to share and teach associates. Disciplined problem solver with limited need for supervision. |

**Peer-Reviewed Publications**

Baustian, M. M., Clark, F. R., Jerabek, A. S., Wang, Y., **Bienn, H. C.**, & White, E. D. (2018). Modeling current and future freshwater inflow needs of a subtropical estuary to manage and maintain forested wetland ecological conditions. *Ecological Indicators*, *85*, 791–807. <https://doi.org/10.1016/j.ecolind.2017.10.005>

Baustian, M. M., Jung, H., **Bienn, H. C.**, Barra, M., Hemmerling, S. A., Wang, Y., White, E., & Meselhe, E. (2020). Engaging coastal community members about natural and nature-based solutions to assess their ecosystem function. *Ecological Engineering: X*, *5*, 100015. <https://doi.org/10.1016/j.ecoena.2019.100015>

Hemmerling, S. A., Barra, M., **Bienn, H. C.**, Baustian, M. M., Jung, H., Meselhe, E., Wang, Y., & White, E. (2020). Elevating local knowledge through participatory modeling: active community engagement in restoration planning in coastal Louisiana. *Journal of Geographical Systems*, *22*(2), 241–266. <https://doi.org/10.1007/s10109-019-00313-2>

Hemmerling, S., Carruthers, T., Hijuelos, A., & **Bienn, H.** (2020). Double exposure and dynamic vulnerability: Assessing economic well-being, ecological change and the development of the oil and gas industry in coastal Louisiana. *Shore & Beach*, 72–82. <https://doi.org/10.34237/1008819>

Meselhe, E., Wang, Y., White, E., Jung, H., Baustian, M. M., Hemmerling, S., Barra, M., & **Bienn, H.** (2020). Knowledge-based predictive tools to assess effectiveness of natural and nature-based Solutions for coastal restoration and protection planning. *Journal of Hydraulic Engineering*, *146*(2), 05019007. [https://doi.org/10.1061/(ASCE)HY.1943-7900.0001659](https://doi.org/10.1061/%28ASCE%29HY.1943-7900.0001659)

Moss, L., Carruthers, T., **Bienn, H.**, McInnis, A., & Dausman, A. (2020). Gulf-wide data synthesis for restoration planning: Utility and limitations. *Shore & Beach*, 23–33. <https://doi.org/10.34237/1008813>

**Presentations**

[Oral] **Bienn, H.**, Franklin, E., Heuisler, R., Philley, N. (2018). “Assessing the Impact of Urban Flooding on Vulnerable Populations in New Orleans using the Internet of Things”. 28th WERC Environmental Design Competition, Las Cruces, New Mexico

[Poster] **Bienn, H.**, Cook S., Dugas, K., Franklin, E., Heuisler, R., Philley, N., Weyenberg, B. (2018). “Assessing the Impact of Urban Flooding on Vulnerable Populations in New Orleans using the Internet of Things”. 28th WERC Environmental Design Competition, Las Cruces, New Mexico

**Awards and Honors**

|  |  |
| --- | --- |
| 2018 | Judges' Choice, 28th WERC Environmental Design Competition, “Assessing the Impact of Urban Flooding on Vulnerable Populations in New Orleans using the Internet of Things” |
| 2013 - 2018 | Recipient of Post 9/11 G.I. Bill Scholarship |
| 2012 | Honorable Discharge from the United States Marine Corps |
| 2011 | Navy Achievement Medal, Good Conduct Medal |
| 2010 | Combat Acton Ribbon, Infantry Squad Leader Course Honor Graduate, Certificate of Commendation |
| 2009 - 2011 | Afghanistan Campaign Medals in support of Operation Enduring Freedom |
| 2009 | Certificate of Commendation, Meritorious Mast |
| 2008 - 2011 | Meritorious promotions: Private First Class, Corporal, and Sergeant (Combat Meritorious)  |

**REFERENCES**

Scott A. Hemmerling, Ph.D. | (225) 228-2101 | shemmerling@thewaterinstitute.org

Director of Human Dimensions, The Water Institute of the Gulf, Baton Rouge, Louisiana.

Clint Willson, Ph.D., PE. | (225) 578-8672 | cwillson@lsu.edu

Director, LSU Center for River Studies, Baton Rouge, Louisiana.

Mike N. Dooley, P.E. Professor, Department of Civil and Environmental Engineering, Louisiana State University, Baton Rouge, Louisiana.

John Pardue, Ph.D. | (225) 578-8661 | jpardue@lsu.edu

Elizabeth Howell Stewart Endowed Professor, Environmental Engineering Undergraduate Program Coordinator, Department of Civil and Environmental Engineering, Louisiana State University. Baton Rouge, Louisiana.

**Extracurricular Activities**

Avid outdoorsman, backpacker and fisherman. Multiple treks throughout the Lower Appalachians, the Sierra Nevadas, and Mojave National Preserve.

Experienced technical diver with more than 100 hours underwater. Capable of underwater surveying and conduct of search and rescue activities.

Volunteer for Habitat for Humanity, The Nature Conservancy, and the Greater Baton Rouge Food Bank.