As we are gearing up for the National Coastal Conference, I’d like to remind our members of one of ASBPA’s greatest benefits for our industry at large — that is our access to information from coastal communities on a national scale. We routinely develop products, like the National Beach Nourishment Database, that reflect a coast-wide perspective on pressing management topics. Our latest white paper, published in the Summer 2022 issue of Shore & Beach, and its associated products, are no exception. The focus is U.S. community perspectives on coastal flooding (Elko et al. 2022).

In late 2021, the ASBPA Science Technology Committee administered a survey of coastal stakeholders to assess specific community challenges and needs related to coastal flooding. We aimed to better understand how local communities are managing flooding, and what types of initiatives are of greatest interest to them.

Our work on the nation’s top five coastal management challenges revealed a notable shift in priorities of coastal communities from beach erosion to water-related challenges (Elko and Briggs 2020). A similar and more specific shift was revealed through this survey.

Survey results are summarized in this figure, which depicts flood mitigation infrastructure that communities have already implemented (both gray and green) with blue circles, and flood mitigation infrastructure that communities have not yet implemented but are interested in (both gray and green) with orange squares.

In terms of nature-based strategies, survey respondents from all regions selected “beach nourishment and dune restoration” as the most commonly implemented green flood mitigation strategy (see blue circles with green icons for each region). However, beach nourishment and dune restoration was the future strategy of least interest to the survey respondents. Thin layer placement on marshes, living shorelines, and hybrid projects on estuarine shorelines were the green flood mitigation strategies of most interest (see orange squares with green icons for each region).

This shift in priorities is enlightening given that the survey respondents were members of organizations, like ASBPA, with a focus on beachfront management. Perhaps the shift is not surprising given that beachfront erosion challenges have an accepted and well-funded mid-term solution.
Coastal Voice

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CoastalCare.org revised, re-launched

By: GARY GRIGGS, Ph.D.,
University of California Santa Cruz

Originally launched in 2010 by the Santa Aguila Foundation, CoastalCare.org was established in loving memory of young Aguila, whose favorite playground was the shoreline of the Atlantic Ocean, an exceptional natural environment of unspoiled sandy beaches.

Committed to the idea that every child has the right to live in a healthy natural environment just as Aguila did, CoastalCare.org was born with a mission of: raising awareness of the many unsustainable practices that are harming the world’s beaches and coasts; educating children and adults about the science of beaches and empower them to act to protect their coastal environments; advocating for sensible and meaningful science-based laws, policies and regulations that will protect and preserve coastlines and beaches around the world; and inspiring and mobilizing individuals and groups to recognize and address global issues of coastal management.

For over a decade, the site was maintained by Claire le Guern, who passed away in July 2021. Claire was truly the heart and soul of Coastal Care, an amazing, dedicated, and enthusiastic savior for the ocean and our natural environment. Though not a coastal scientist, she dedicated herself to studying the issues, posting the latest discussions and articles, encouraging and acknowledging the writings of many coastal scientists and supporters. She also researched and wrote a significant number of stories herself. She was a gift to the preservation of the world’s beaches.

After considerable work, a re-designed CoastalCare.org is now online to honor the memories of both Aguila and Claire, and to re-commit ourselves to its mission. The world has changed in the past twelve years, but I know it is clear to each of you that the mission of CoastalCare.org is still powerfully relevant. The impacts of climate change have become even more obvious and threatening.

Whether sea-level rise, shoreline retreat and the loss of beaches, or a warming and more acidic ocean containing more plastic, the ocean and the coasts of the world need our attention.

New Shore & Beach highlights the past, anticipates the future

Your next issue of the ASBPA journal Shore & Beach (Volume 90, Number 3) is headed to your mailbox and in-box. As editor Lesley Ewing states: “Coastal communities have recognized the need to address coastal hazards. But while they are studying historic hazards, developing trends for erosion and quantifying flood levels to understand current hazards, rising sea level is adding multiple complications for using these efforts to anticipate and plan for future vulnerabilities.” The eight papers in this issue focus on learning about past trends as well as planning for future hazards. In addition to the technical and forum pieces, Nick Sadrpour reviews Gary Griggs’ fascinating new book, The Ominous Ocean.

Articles in the issue include:
• “We’ll take Manhattan: Preserving an urban (Southern California) beach in the 21st century” by Lindsey Sheehan, Kristina Kunkel, Philip King, Dana Murray, and Nicholas Garrity
• “An ASBPA White Paper: U.S.

■ Continued on page 10

■ Continued on next page
Shore & Beach photo contest: Deadline for beach photos is Oct. 1!

The editors of Shore & Beach announce the ASBPA’s 15th annual photography competition. The purpose of the contest is to highlight the beauty and natural wonders of America’s magnificent coasts as part of celebrating more than 85 years of continuous publication of Shore & Beach.

Any photographs depicting the coastal zone are appropriate. These include, but are not limited to beaches, bluffs, marinas, wetlands, marine life, recreational facilities, and engineered projects as long as they include the setting in which they were built (i.e. no portraits of dredges or your favorite armor unit).

Manipulated photographs are also welcome if the photographer briefly describes the changes or procedure. The original base photograph must have been taken by the submitter.

Submissions must be made in one of these geographic categories:
- U.S. East Coast
- U.S. Gulf of Mexico Coast
- Caribbean (Puerto Rico, U.S. Virgin Islands)
- U.S. Pacific Coast and Alaska
- U.S. Great Lakes
- Pacific (Hawaiian Islands, Guam, etc.)

Winning photographs may be used as cover art on Shore & Beach. Therefore, VERTICAL-format photographs are highly preferred. Horizontal photographs can be submitted, too, but if a horizontal format photograph is a winner in one of the categories below, the editors of ASBPA may have to crop some of the image to fit on the cover of Shore & Beach.

Photographs must have been taken since 1 January 2022. Photographs can be full-color, black and white, sepia, or colorized.


Looking back: Shore & Beach... 75, 50 and 25 years ago

Shore & Beach has a rich history of coastal research and the archive provides a useful resource to delve into prominent coastal issues. To share some of this history, the Editorial Board has reviewed past issues and is posting some articles from 75, 50 and 25 years ago. The first round of articles, from 1947, 1972 and 1997 are reflected below and available on the home page of our website.

They were selected to remind readers that two concerns today — shore protection programs and changing water levels — have been part of the S&B discussion for years. We hope you enjoy this historic perspective and if you have any favorite articles from past issues, please let us know and we may include them in a future round.

- **1947:** “New Jersey Shore Protection Progress” (PDF~2mb) by Morgan F. Larson, Commissioner of Conservation, State of New Jersey.
- **1972:** “On the Classification and Trends of Long Person Sea Level Series” (PDF~574kb) by Steacy D. Hicks, National Ocean Survey, National Oceanic & Atmospheric Administration.
- **1997:** “Climate Change and the Water Levels of the Great Lakes” (PDF~301kb) by Stanley A. Changon, Illinois State Water Survey.

Next community perspectives on coastal flooding” by Nicole Elko, Tiffany R. Briggs, Reza Marsooli, Patrick Barrienau, Cheryl Hapke, Kimberly McKenna, Jonathan Simm, Marc Beyeler, Matt Smith, and Cary Troy.

- “Perceptions and factors impacting visitor decisions: The Blue Flag pilot at Galveston, TX” by Kristin Butler and Annie Mercer.
- “Who owns the beach?” by James Houston and Angus Gordon.
- “Field measurements of boat wake attenuation in salt marshes of coastal Alabama” by Katherine M. Dawson and Bret M. Webb.
Marina Vicens-Miquel: Discipline, passion keys for success

Marina Vicens-Miquel is a Geospatial Computer Science Ph.D. student at Texas A&M University-Corpus Christi working on her research at the Conrad Blucher Institute as part of the National Science Foundation AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography (ai2es.org; conradblucherinstitute.org).

My background is a little bit different than most researchers. My background is in athletics. I started playing tennis at five years old and I began to compete when I was eight. Since then I competed in top tournaments in Spain for many years. This allowed me to get a full athletic scholarship to play Division I college tennis at TAMUCC while graduating with a double major in computer science and mathematics.

It may sound surprising but, in my opinion, competitive sports and research have a lot in common. I think that tennis gave me a set of skills that are essential in research. It taught me the discipline to work hard day after day, that passion for what you do is a key to success. It taught me to focus on the process rather than on the results because the process is what guides us to long-term success. It is what allows us to keep believing in ourselves when the results are not as good as expected. Believing in the process showed me that if I work hard, smart, and with a great team I can accomplish all of my goals.

So my competitive tennis mentality allows me to see research as a competition within myself where I try to be a better researcher every day. Continued on next page

Jeremy Smith:
Urban planning and coastal ecologies

Jeremy Smith is a Coastal Engineer with the California Coastal Commission.

It all started with a trip to the Netherlands while Jeremy was a freshman at the University of Southern California. There, he saw what it meant for society to exist at (or under) sea level. Growing up in the San Francisco Bay Area, Jeremy became very interested in how climate change would affect the places he grew up. Having grown up kayaking through the marshy sloughs of his hometown, Redwood City, and the magnificent beaches of the San Mateo coast, he also learned to appreciate the natural systems along California’s shores.

Jeremy ended up creating his own major — Urban Systems and Coastal Ecologies — which combined urban planning and coastal environmental science. His senior thesis was on the effects of an eelgrass-oyster living shoreline on inshore sediments in Newport Bay. Immediately after graduating, Jeremy realized he wanted to pursue engineering. He took a job at Moffatt & Nichol where he worked on various sea level rise vulnerability assessments for cities in Southern California such as the iconic Venice Beach as well as living shoreline designs. While he worked, he also took classes at local colleges to get all of his engineering prerequisites. Continued on next page
Jeremy ended up pursuing a Master’s of Science in Civil & Environmental Engineering at Stanford University. There, he focused on environmental fluid mechanics and sediment transport modeling. He had the chance to work with a team of researchers from Oregon State University, the University of Delaware, and Texas A&M on a near-scale test of vegetated dunes and other nature-based solutions in OSU’s OH Hinsdale Wave Research Laboratory.

Contributing to research in the coastal engineering field was an amazing experience for Jeremy, though his interests were around the applications of that research to policy and management. He was lucky to find the California Sea Grant State Fellowship Program, which pairs recent grads with government agencies for a year to work on coastal and marine policy.

Jeremy was grateful to match with the California Coastal Commission, one of three agencies that make up California’s coastal program. He spent a year working under Dr. Lesley Ewing (famed coastal engineer and editor of Shore & Beach) where he fell in love with the Commission’s work and mission. As the Commission’s coastal engineer, Jeremy works on the interface of science, engineering, and policy. Part of his role includes working to advise the agency on the latest advancements in the field.

Jeremy is also an active member of ASBPA. He serves as the Students and New Professionals Chapter’s Treasurer and active volunteer for the California Chapter. He hopes to continue to work to build strong connections among students and new professionals and engage communities about coastal science and engineering.

'Hurricane Sandy: 10 Years Later’ set for Oct. 6-7

NSBPA will host the Northeast Coastal Conference on Hurricane Sandy: 10 Years Later on Oct. 6-7 at Stockton University Atlantic City Campus, Atlantic City, NJ. View the draft agenda, registration information, sponsorship opportunities, and accommodations at https://www.eventbrite.com/e/northeast-coastal-conference-superstorm-sandy-10-years-later-registration-219214164467 or asbpa.org/nsbpa/.

This mentality has allowed me to learn more than I thought I could during the first two years of my Ph.D.

My research focuses on coastal AI (Artificial Intelligence). More specifically, I love researching applied and operational AI. I like to see how university research can make an impact on society. I think that AI has great tools, but sometimes it is hard to go from theoretical to operational AI. I really like operational research because researching something that society will use gives me this extra motivation and satisfaction to work on something that can help people.

The goal of my dissertation is to create an AI physics-based operational inundation model along the Gulf of Mexico. Predicting coastal inundation is very important for coastal managers to make preparations and mitigate economic losses from coastal flooding events. At present most operational models predict future average water levels such as water levels measured by a tide gauge, we are developing a method based on different AI components to predict how far up the water will reach on a beach.

To predict inundation, we decided to split inundation into three steps. The first step (already completed) was to develop an AI automated method to detect the wet/dry shoreline in coastal imagery using AI-based computer vision techniques. This step was essential because it is important to cover different locations and a broad range of conditions to predict inundation. Manually labeling such a large data set is not possible due to the very time-consuming nature of the task.

The second step is to improve the prediction of average water level at tide gauges using more sophisticated AI methods. The third and final step will consist of predicting inundation or total water level including runup on beaches. To accomplish this task, we plan to use the results obtained in steps one and two in combination with other atmospheric and oceanic information. The ultimate goal of our project is to make an impact on society by developing a model that can be implemented initially in the Gulf of Mexico and eventually more broadly.
Countdown to the conference!

The National Coastal Conference “Shifting Shores, Surf, and Sediment” begins Wednesday, Sept. 14, through Friday, Sept. 16, at the Westin Hotel Long Beach. The Coastal Zone Foundation Short Courses will be on Tuesday, Sept. 13.

Register now to participate in-person or virtually, find sponsorship opportunities, travel and hotel information, and the current program by visiting asbpa.org/conferences/. Special thanks to Diamond Sponsor Moffatt & Nichol, founded in Long Beach, for their support!
Thanks to our sponsors for the 2022 ASBPA National Coastal Conference

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**NOTE:** Registration fees are the same for in-person or virtual attendees and partial-event registrations are not available.

Cancellations for registration are available until Sept. 5 to receive a full refund (minus a $50 processing fee).

Send checks or government purchase orders to ASBPA, 11940 Palba Way, #5102, Fort Myers, FL 33912-9094.

A variety of sponsorships still available...
See details at asbpa.org/conferences or email managing@asbpa.org.
We are pleased to offer two new short courses as a prelude to the National Coastal Conference. Both short courses, offered in partnership with Coastal Zone Foundation, are new modules of the Certified Coastal Practitioner™ (CCP) certification and will be held on Tuesday, Sept. 13 at the Westin Long Beach.

EWN: Engineering With Nature® (EWN) is leading a four-hour course on designing natural-based infrastructure for increased coastal resilience. The course will include technical presentations that cover a broad range of topics including quantifying environmental benefits associated with natural infrastructure, strategies for designing with natural infrastructure, innovative engineering and operational procedures, modeling, benefits quantification, and strategic communications.

The course objectives are:
1) Provide participants with an overview of EWN and its practices and example projects.
2) Demonstrate how natural infrastructure promotes coastal resilience, flood risk reduction, and ecosystem services.
3) Introduce participants to many EWN tools, materials, and solutions.
4) Share the innovative research being conducted within the EWN program.
5) Extend the opportunity for others to get involved.

This course will be offered 1:00-5:00 p.m. PDT on Sept. 13. Course instructors are to be determined.

Three Coastal Engineering Design Risks & Remedies

This course discusses three major pitfalls in the design of coastal engineering projects and introduces approaches to safeguard against the associated risks. The design risks are related to the following concepts: (1) Design wave height; (2) Sediment transport; and (3) Design methodology.

Participants will need to complete quizzes, two of which require application of simple, publicly available software to perform preliminary calculations and make design judgments to confirm an understanding of the design risks. Course participants will need to bring a laptop.

This course is led by Saied Saiedi, Ph.D., P.E., a civil engineer with 33 years of engineering and academic experience in various countries including Canada and US. His hydrotechni cal interests cover a wide range: Coastal structures and processes, floating offshore structures, submarine pipelines, free surface flow, hydrodynamics, surface hydrology and flood studies, and dam safety review. Dr. Saiedi has developed, managed, and reviewed several numerical and physical modeling works. His COUPFLEX model (J. of Hydraulic Engineering, ASCE, May 1997) is among the first coupled simulations of unsteady water-sediment flow. Since 2020, he has been working with the Center for Coastal Services (Boynton Beach, FL), Tetra Tech. This course will be offered 8:00 a.m.- 12:00 p.m. PDT on Sept. 13.

Continued on next page
Courses

Those who successfully complete the courses will receive four hours of PDHs per course, along with a certificate of completion. Both courses can be applied towards the CCP certification, and can be taken in conjunction with your conference registration (for an additional fee) or as stand-alone courses for people who are not planning to attend the conference. Registration costs are $100 per course, $50 per course for students.

To earn the CCP credential, candidates must complete a series of 10 short courses offered by the Coastal Zone Foundation in cooperation with ASBPA, which are available online as stand-alone webinars that allow those pursuing the CCP certification to process at their own pace. These courses deliver the fundamentals of each topic applied in coastal management, so that individuals obtain exposure to a breadth of knowledge and expertise. The CCP program provides participants with multidisciplinary instruction on comprehensive coastal management and defines the body of knowledge which reflects best practices for coastal practitioners.

CoastCare

and care now more than ever.

In re-committing ourselves to “illuminating the science, celebrating our coasts, and empowering communities,” we look to science to inform our understanding and our choices. We look to artists to celebrate our world, while also interpreting the science to shed light on the human condition. All of this empowers individuals as well as communities to make informed choices, in their personal lives, as well as at the voting booth.

With the continued support of the Santa Aguila Foundation, Coastal Care is opening a new chapter and are reaching out to you and all friends of the coast and beaches globally to join us — whether through your research, ruminations, artistic explorations — to share your stories, visions and creative work with others around the planet to help motivate, encourage and combine all of our creative energies to help preserve and protect coasts and beaches everywhere. We welcome all contributions or additions to any of the sections of the site, and encourage you to submit, whether articles, stories, photographs, video links, new books, or links.

Please visit and explore CoastalCare.org to engage with the material in any way that works for you, and get in touch with us!

References


CSBPA: Call for Wiegel Scholarship Applicants

The California Chapter is asking ASBPA members to help spread the word on a call for applicants for the 2022 Robert L. Wiegel Scholarship for Coastal Studies. The deadline for submittals is Oct. 14, 2022. The award, which may be made to a single student or divided among several students, will equal or exceed $4,000. This award is open to students pursuing a graduate degree at a California university or college in coastal science or coastal engineering. Further information, including application details and award criteria, can be found on our Chapter webpage: Robert L. Wiegel Scholarship for Coastal Studies (asbpa.org).

NSBPA: ‘Sandy, 10 Years Later’ conference Oct. 6-7

NSBPA will host the Northeast Coastal Conference on Hurricane Sandy: 10 Years Later on Oct. 6-7 at Stockton University Atlantic City Campus, Atlantic City, NJ. View the draft agenda, registration information, sponsorship opportunities, and accommodations at https://www.eventbrite.com/e/northeast-coastal-conference-superstorm-sandy-10-years-later-registration-219214164467 or asbpa.org/nsbpa/.

Flooding

in beach nourishment, and fairly well documented and recognized co-benefits of recreation, tourism/economics, and habitat restoration in addition to flood mitigation. On the other hand, until recently, flooding challenges in low-lying, non-beachfront coastal areas have not been prioritized or systematically addressed with a similar large-scale, replicable solution that has been implemented by hundreds of coastal communities.

I encourage you to read the white paper found on the resources tab of our website. If you’re attending the National Coastal Conference in Long Beach, stop by Reza Marsooli’s poster on the topic to pick up a copy of the one-pager.