

NEWSBREAKER

CALIFORNIA SHORE & BEACH PRESERVATION ASSOCIATION

July 2004

President's Message

by David Cannon

To retreat from armoring, or armor from retreating? That is the question. Please forgive the silly, literary humor but it is not often that we get to mix (albeit poorly) Shakespeare and coastal engineering, so every opportunity counts!

During the last five to ten years, the issue of coastal armoring (i.e., shoreline protection) has been at center stage for California. The "pro-armor" group argues that property rights must be preserved, public infrastructure is worth protecting, and coastal armoring can be done without significant adverse impacts to the environment. The "pro-retreat" group argues that coastal armoring adversely affects public access to the shoreline, the benefits to the public are not worth the costs, erosion is a natural process that should be allowed to continue, armoring causes significant adverse impacts to the environment, and armoring only delays the retreat that would likely occur. There are numerous position papers, scientific journal publications, newspaper articles, case law, and project studies that support various aspects of these arguments for each group. As a matter of fact, the next edition of the Newsbreaker will include a point, counterpoint article that covers these issues in more detail so stay tuned. However, I would like to suggest that both groups and the spectrum of individuals, agencies, and organizations that fall between both of these extremes should consider a different approach in addressing this important coastal issue.

Land development throughout much of the United States and in all of California is based on land-use zoning. Municipalities (e.g., cities) develop general plans with land use zoning for such designations as residential, commercial, industrial, and open space/park. I am not a land-use planner by profession nor do I purport to be one, so I admit that my knowledge of the subject is somewhat limited. However, it seems to me that the concept of land-use zoning was implemented, at least in part, due to a developing scarcity of land. When land was plentiful and people were relatively scarce, the chances of conflict (e.g., industrial complex built next to a residential neighborhood) were fairly small. However, this changed as our population grew and land was developed. As areas became more crowded it became increasingly important to develop land use plans to manage

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California State Science Fair Awards 2004

by Phyllis Grifman

Swati Yanamadala, an 8th grader, and Aaron Goldin, an 11th grader, were presented with CSBPA's Outstanding Coastal Project awards at the California State Science Fair on May 25, 2004. Both of these students presented projects on coastal science and engineering that were impressive not only for their originality but also for their scientific rigor.

Swati Yanamadala's project, "The Determination of Bacterial and Pollutant Flows in Coastal Estuaries of Southern California" won the \$250 award from CSBPA in the junior division. Miss Yanamadala examined pollutants in the Ballona wetlands and developed a mathematical model to predict pollutant flows and effects on water quality and sediments, an impressive achievement for this eighth-grader with an interest in the environment and mathematics. Her idea for the project came from her concern about pollution coming from the wetlands and Ballona Creek into nearshore waters. On her own initiative, she sought a mentor at Loyola Marymount University who provided her with space in his lab. Miss Yanamadala's grasp of both, field and laboratory techniques, as well as the mathematics, was very impressive.

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growth and reduce adverse impacts to existing development.

This information might be interesting but what does it have to do with shore and beach preservation, which is the mission of our organization? Well, I suggest that we consider the adoption of the land use zoning concept for our beaches and shorelines. The California Coastal Zone Management Program works to achieve this goal to some degree using a three-pronged strategy based on acquisition (lead by the California State Coastal Conservancy), regulation (lead by the California Coastal Commission), and coastal planning (lead by the local municipalities). Beach area zoning to some degree does exist in some City and County zoning codes (General Plans and Local Coastal Plans); however, this zoning has typically been developed and implemented without adequate consideration of beach and shoreline issues. In addition, there is no comprehensive (master) plan for our state's beaches and shorelines. The type of plan

envisioned here would include beach and shoreline areas designated for such uses as residential, commercial, industry, recreation, and wildlife. The land use zoning would provide the blueprint needed to guide our actions for preservation, development, restoration, and enhancement of the shore. The development and implementation of such a plan might reduce some of the conflict that arises on a site-by-site and region-by-region basis as projects and programs are implemented under our current system. Both groups mentioned above might be more inclined to work together if they could see a vision of our beaches and shorelines instead of being faced with the proposition of no development on the one hand or no preservation on the other.

Well, these are my brief thoughts on the subject but I am sure you have some thoughts as well. I would like to hear from you so please feel free to contact me at david.cannon@everestconsultants.com. Together we can make a difference – much ado about no-sand!

Group Seeks Stricter Oceans Protections

by Edward Sifuentes, North County Times, June 9, 2004 - reprinted with permission

SAN DIEGO – A statewide environmental advocacy group called Tuesday for stricter laws to protect the ocean, including proposals offered by local and state legislators to ban bottom-trawling fishing, protect sensitive marine areas and prohibit cruise ships from dumping waste water into the sea.

The group, Environment California, held a press conference at the La Jolla Cove to kick off a statewide campaign to encourage Gov. Arnold Schwarzenegger to support the bills. "We are here to show the governor that people in San Diego really care about the ocean," said Sean Mandel,

campaign director in San Diego for the statewide group. "The scientific evidence is in, we know the ocean is in trouble, and we need to take action."

Most North County's lawmakers voted for the waste-water dumping bill on the Assembly floor last month. The bill is opposed by the International Council of Cruise Lines, a trade group for the cruise ship industry. "Clean oceans are a cruise lines' lifeblood and it is in our inherent interest to take the necessary steps to keep the oceans healthy and marine sanctuaries pristine," said Michael Crye, the group's president, in

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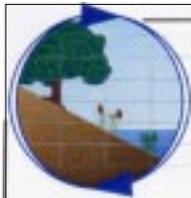
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If you have an article that would be of interest to our group, we would like to see it. Please submit articles for the next newsletter to Holly Celico-Lee at Holly@coast.ucsd.edu.

**Here is our publication schedule for this year:
October issue deadline:
September 20, 2004**

California State Science Fair Awards 2004 *Continued from Page 1*

CSBPA awarded its senior division prize of \$500 to Aaron S. Goldin, a San Diego student whose project, "Inventing a New Conversion Technology: Autonomous Gyroscopic Ocean-Wave-Powered Generator," was outstanding. Mr. Goldin invented a gyroscopic instrument that spins when excited by the rolling motion of waves, generating enough energy to sustain itself. This is potentially

applicable to moored buoy systems, which currently rely on frequent battery changes to collect continuous data. Mr. Goldin sought help from a mentor, at Scripps Institution of Oceanography, where he was a volunteer. Mr. Goldin also won the prestigious John D. Isaacs Scholarship, awarded by California Sea Grant. This \$12,000 award is presented to promising young scientists for scientific achievement

and innovation in marine sciences.

On behalf of CSBPA, I congratulate Miss Yanamadala and Mr. Goldin on their remarkable achievements, and urge all CSBPA members to spread the word that we will be looking for another set of outstanding coastal projects at next year's California State Science Fair.

See photos of winners on Pages 5 and 6.



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Requested**

For information on becoming a
member of CSBPA, please visit
www.asbpa.org/membership.html.

Director Profile – Bob Battalio

Bob Battalio is the Principal at Philip Williams & Associates, Ltd. and he's been on the job for 20 years . . . not including surfing breaks! Bob received a Bachelor of Science in Civil Engineering from Virginia Tech, and a Master of Engineering in Civil Engineering from the University of California, Berkeley. At work Bob says he "leads studies of coastal and estuarine processes, and designs for the restoration of natural aquatic ecosystems including beaches and coastal wetlands." He also "advocates water time for all staff."

Some of Bob's professional highlights include "Working to restore and enhance shores and coastal wetlands..." and providing "technical assistance to organizations that value the natural environment..." His professional challenges include, "Furthering shore and beach preservation..." and "Centering my average energy in a place I never really exist: mid-way between the triad of diametrically opposed quantum energy states defined by surfing, family and work."

Of his personal insights Bob offers, "Preservation of an eroding shore requires management of the conflict between property rights and the public interest... Technical study and education are required to develop an understanding of the long-term effects of our actions, such as the proliferation of shore protection structures along the California Coast. Without shoreline management based on technical understanding and a long-term vision, I fear that our shore will be devastated for generations. We cannot engineer a better shoreline than the natural one – the best we can expect is to minimize impacts and maximize restoration/protection of the shore."

What's Bob's coastal message for the CSBPA membership? "Thanks for being a part of CSBPA – and please speak up and participate in the dialog regarding the future of our shores and beaches!"

JOHN D. ISAACS SCHOLARSHIP AWARDED

by Christina S. Johnson, California Sea Grant – reprinted with permission

Aaron Sargent Goldin of San Dieguito Academy High School in Encinitas has won this year's prestigious California Sea Grant John D. Isaacs Scholarship for outstanding ocean engineering research.

The scholarship was presented May 26 at the award's ceremony of the 53rd annual State Science Fair in Los Angeles.

Goldin's project, "Invention of a New Conversion Technology: Autonomous Gyroscopic Ocean Wave-Powered Generator," also earned him a scholarship from the Marine Technology Society, as well as first place in the senior engineering competition of the Greater San Diego Science and Engineering Fair.

Goldin said he was especially proud of his Isaacs Scholarship because one of its four judges was Richard Seymour of Scripps Institution of Oceanography, an authority on waves and wave power whose doctoral thesis advisor was John D. Isaacs.



Aaron Goldin, an 11th grader from San Dieguito High School Academy in Encinitas, won the California Sea Grant John D. Isaacs scholarship at the 2004 California State Science Fair in May. Goldin was also awarded CSBPA's Outstanding Coastal Project award for the Senior Division.

"Perhaps the Isaacs is the most rewarding award I've won because I know an expert in my field really appreciated my research," Goldin said.

At 16 and a junior, Goldin will have to wait a year before receiving his Isaacs Scholarship, a \$12,000 college scholarship paid over four years. But this doesn't mean he's slacking on his research. "I am going to keep on going," Goldin said. "Next, I'm trying to build a larger version of Gyro-Gen that can generate a significant amount of power."

In his winning project, Goldin designed, built and tested an instrument that converts surface wave energy to electricity, using gyroscopic precession to turn a crank connected to an electric generator. He's named his invention Gyro-Gen, short for gyroscope and generator. The prototype he developed produces about 3.0 watts. His goal is 1,000 watts. The average U.S. household uses about 2,000 watts.

Producing a renewable source of electricity on a large scale may be outside the scope of this project, but Gyro-Gen could truly lead to advancements in powering autonomous ocean instruments, ones that don't need batteries.

For one, all of Gyro-Gen's moving parts are housed inside a watertight buoy - an important detail since corrosion is a major obstacle to building and leaving instruments at sea. A second improvement over conventional ocean instruments, Gyro-Gen is portable and does not have to be "hard-moored" to the seabed.

"His project is definitely an example of seeing connections that other people

could not see," Seymour said. As far as anyone knows, Goldin is the first to put a gyroscope inside a buoy. This is the kind of out-of-the-box thinking that earned Isaacs renown.

California Sea Grant established the Isaacs Scholarship in 1981 in memory of John D. Isaacs (1913-1980), a Renaissance man and world-renowned oceanographer who, as director of the Institute of Marine Resources at the University of California, was an ardent supporter of the then newly established Sea Grant. The Isaacs Scholarship is awarded to young scientists in the hopes of continuing his legacy of science, innovation and service to society.

Students applying for the Isaacs Scholarship are asked to nominate a teacher who has played a major role in their education. This year's Teacher Recognition Award went to Leslie C. Gushwa, science teacher and science fair advisor at San Dieguito Academy. She will receive \$500 in recognition of her excellence in marine science education.

Virginia Dick, a junior at Point Loma High School, was awarded honorable mention for her research on algal blooms.

NOAA's California Sea Grant College Program is a statewide, multi-university program of marine research, extension services, and education activities administered by the University of California. It is headquartered at Scripps Institution of Oceanography at the University of California, San Diego. The National Sea Grant College Program is part of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce.

Group Seeks Stricter Oceans Protections

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a written statement about the bill when it was introduced last year. The cruise ship industry, Crye said, takes its own steps to minimize cruise ships' effects on the health of the nation's waters.

"We are committed to environmental preservation and have invested millions of dollars in new treatment technology solutions to continue our progress and minimize the environmental impact of cruise ships," he said.

Mandel said the environmental group plans to collect, through its Web site and at various events, 40,000 signatures of support from residents to take to the governor. He added that he was encouraged by statements Schwarzenegger made last week calling for a plan to better manage the state's waters and seashores. Schwarzenegger asked state officials Friday to come up with an ocean protection plan within 90 days. "It's clear that the governor is concerned about the issue," Mandel said. "Now, we need his political support. Having the governor support these bills is

crucial for ensuring they make it to his desk." A spokesperson for Schwarzenegger did not return calls for comment about the specific bills Tuesday.

California Secretary for Environmental Protection Terry Tamminen said Friday that the agency would develop a plan for the state to improve ocean and coastal management. He said the plan would include working with industry, universities, public interest groups and philanthropic interests to improve ocean and coastal management.

There are 1,100 miles of coastline in the state. California is heavily dependent on tourism at its beaches and coastal areas, including several cities in North County. The state receives an estimated \$60 billion in direct spending and \$15 billion in annual tax revenue, according to Tamminen. Tamminen announced that the state would develop the plan as part of Schwarzenegger's response to the U.S. Commission on Ocean Policy's

preliminary report urging a more coordinated and comprehensive national ocean policy. The commission found pervasive water contamination in the nation's waters. It also found that national waters' fish stocks, marine resources and wildlife habitats have been depleted. Among the bills Environment California would like the governor to support are:

AB 2529 (Kehoe, D-San Diego) requiring the State Sea Water Board to create and enforce standards for California's sensitive marine and coastal areas;

AB 2672 (Simitian, D-Palo Alto) prohibiting cruise ships from dumping sewage into state waters; and

SB 1319 (Alpert, D-San Diego) creating better coordination between state agencies that oversee protection of coastal and marine waters.

The Associated Press contributed to this report. Contact staff writer Edward Sifuentes (760) 740-5426 or esifuentes@nctimes.com.



Susan Brodeur (left), Phyllis Grifman (third from left), and Craig Leidersdorf (fourth from left) present Swati Yanamadala (second from left), an 8th grader at Chadwick School in Palos Verdes, with CSBPA's Outstanding Coastal Project award for the Junior Division at the 2004 California State Science Fair.