Rigs to Reefs? Options for Platform Decommissioning

Friday, July 23, 2010 • Waterfront Hilton, Huntington Beach, CA

California's Interest In A Science Based Approach to Platform Decommissioning

9:15 AM - 9:30 AM

Brian E. Baird is the Assistant Secretary for Ocean and Coastal Policy with the California Natural Resources Agency. He serves as the Director of the California Ocean Resources Management Program under Governor Schwarzenegger, and has served in this role under Governors Davis and Wilson. He was the chief writer of Governor Wilson's statewide strategy for protecting and managing the State's ocean resources entitled, California's Ocean Resources: An Agenda for the Future. Assistant Secretary Baird was also the chief writer of Governor Schwarzenegger's 2004 strategy entitled, Protecting Our Ocean – California's Strategy for Action. On Earth Day April 23, 1999, Assistant Secretary Baird was designated an "Environmental Hero" by the National Oceanic and Atmospheric Administration and was named as the Outstanding Alumni of the Environmental Studies Program at the University of California at Santa Barbara for 2001. In February 2008, he received NOAA's Susan Snow-Cotter Award for Excellence in Ocean and Coastal Management. He has served as a Vice-Chair of the international conference, California and the World Ocean (CWO) '97, '02 and '06, and is currently working on plans for CWO '10.

Dr. Amber Mace serves as the Executive Director of the Ocean Protection Council (OPC) and Assistant Secretary for Coastal Matters. She served as the Executive Director for the California Ocean Science Trust (OST) and the Science Advisor to the OPC from 2006 to 2009. Prior to leading the Ocean Science Trust, Mace worked as a National Sea Grant John A. Knauss Marine Policy Fellow for the U.S. Senate's Committee on Commerce, Science, and Transportation in 2006. She also served as a California Sea Grant state fellow at the Ocean Resources Management Program in the California Natural Resources Agency in 2005. Mace earned a Bachelor of Arts in Geography from University of California, Berkeley in 1994 and a Doctorate in Ecology from University of California, Davis and the Bodega Marine Laboratory in 2005. Prior to completing her doctorate, she worked with the Farallones Marine Sanctuary Association in support of outreach activities for the National Marine Sanctuary Program and participated as a submersible pilot with the Sustainable Seas Expedition. Mace has spent her life along the shores of California and is working actively to improve communication and collaboration among scientists, resource managers, policy makers, and the public.

Ocean Science Trust Study Overview

9:30 AM - 9:45 AM

Dr. Brock Bernstein is an environmental scientist specializing in program design and evaluation and policy development in areas such as regional monitoring, stormwater management, and fisheries management. He has conducted external evaluations of large-scale research and management programs at the regional, state, and national level. Dr. Bernstein has served on National Academy of Sciences committees that focused on marine monitoring, coastal governance, and data integration for global change research. He received his undergraduate degree in English Literature and his Ph.D. in Biological Oceanography from the Scripps Institution of Oceanography.

The California Ocean Science Trust (OST) recently released a report: Evaluating Alternatives for Decommissioning California's Offshore Oil and Gas Platforms: A Technical Analysis to Inform State Policy. This study considered a wide range of potential decommissioning options, ranging from complete removal to artificial reefing and a variety of other alternative uses. Two options, complete removal and artificial reefing, were selected for in-depth analysis, which included assessments of potential impacts of each option on biological production, air emissions, costs, marine mammals and birds, ocean access, socioeconomic values, and water quality. Assessments included a combination of quantitative and qualitative information and were integrated into an interactive decision model. This model allows users to work directly with the data used for the report, and to input their individual assumptions and preferences to investigate how these might affect the choice between options. The report also examines the legal and institutional requirements for implementing the artificial reefing option.

Fish Production of the Southern California Oil Platforms

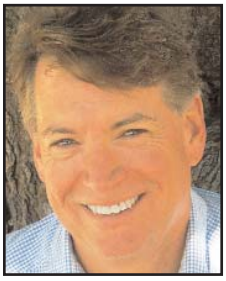
9:45 AM - 10:30 AM

Dr. Dan Pondella directs the Vantuna Research Group at Occidental College where he is an Associate Professor of Biology. He received his A.B and M.A. in Biology from Occidental College, and Ph.D. in Biology from UCLA. His research interests include the ecology of California marine fishes, with an emphasis on the Southern California Bight. He recently finished working on the Master Plan Science Advisory Team for the South Coast Study Region, California Marine Life Protection Act. One of his current projects is a collaborative research effort to study all of the nearshore rocky reefs of the Southern California Bight. As a Los Angeles native, he has been researching these reefs since 1985.

Beginning with empirically collected submersible data, the biological implications of oil platform decommissioning were modeled. First, stock estimates were made for eight well studied platforms that each represented the major offshore habitats where the 27 current platforms were found. Stocks were estimated for both the entire platform and those below the proposed topping depth (26 m). Somatic production was estimated using the von Bertalanfy growth equation for all fishes. Using an annual mortality and recruitment estimates, production was calculated for a five year period. Somatic production and recruitment varied among platforms due to location, size, and age of the fish assemblages. Recruitment was not significantly affected by topping; a finding consistent with recent studies demonstrating that the bulk of rockfish recruitment was below the topping depth. Production estimates were high for both existing and topped structures, on average 1-2 orders of magnitude greater than rocky-reefs in the Southern California Bight.

Air Pollution Emissions from Platform Decommissioning

10:45 AM - 11:15 AM



Peter Cantle, vice president and senior ecologist with BioResource Consultants, Inc., has spent his professional career in energy development and energy management-related matters. A native of San Pedro, California, he received his B.S. and M.S. in Ecology from Texas A&M University. From 1978 - 1985, he worked in the resource extraction industry in Houston, Texas. He returned to California in 1985 for a position with local government in Santa Barbara County, managing the environmental review, permitting, construction oversight and regulatory compliance of major oil and gas development projects. In 1988, he moved into the air pollution field, managing the engineering, permitting, compliance and enforcement, innovative technologies, and air toxics programs for the Santa Barbara County Air Pollution Control District. His 23-year tenure with Santa Barbara County provided substantial experience with both the installation and decommissioning of offshore oil and gas development projects. In 2008, he left local government for his current position consulting in support of clean energy development. He and his wife Cindy live in Ojai, California and are the proud parents of two young men – the elder a photographer and videographer for two well-known motorsports magazines, the younger a Ph.D. candidate in neuroscience at UCLA.

Air pollution emissions from platform decommissioning offshore California were qualitatively evaluated as part of a large-scale assessment of decommissioning issues that face the state. Decommissioning requires a vast array of pollution-emitting diesel engines of different sizes, power ratings, ages, and emissions characteristics. Because a comprehensive evaluation of all 27 platforms was beyond the study's scope, the emissions magnitude was estimated using a worst-case analysis of California's largest and deepest platform. Two options were assessed: complete platform removal; and, removal of platform components down to a depth of -85 feet bmsl. The analysis was limited to the phase when emissions will be highest, during which a Heavy Lift Vessel and its associated support vessels are stationed at the platform to lift and control platform sections as the structure is dismantled. Full removal generated approximately 6.5 times more emissions than partial removal, and was essentially related to the amount of time spent on station. The analysis also notes that recent regulatory and technical advances will lessen decommissioning emissions. For example, the requirement that decommissioning vessels and equipment use ultra-low sulfur "California diesel" will allow the use of more emissions control techniques, which could considerably reduce air pollution from decommissioning.

Decommissioning Costs for Pacific OCS Platforms

11:15 AM - 12:00 PM

Dr. Robert Byrd is a Sr. Vice President at Proserv Offshore, Inc. (formerly Twachtman, Snyder & Byrd, Inc.) of Houston, Texas. He has over 30 years experience in the offshore oil & gas industry and for the past 15 years he has focused on offshore oil and gas platform decommissioning. He recently served as Principal Investigator for the Minerals Management Service's update of Pacific OCS platform decommissioning costs. Dr. Byrd received his B.S. in Marine Engineering from the U.S. Coast Guard Academy, M.S. in Ocean Engineering from the University of Alaska, and Ph.D. in Engineering from the University of California at Berkeley. He is a registered Professional Engineer and member of the ASCE, SNAME, and MTS.

Proserv Offshore has recently completed a study for the U.S. Department of the Interior, Minerals Management Service (MMS) updating the decommissioning costs for the Pacific OCS platforms. The presentation will discuss these costs and the major factors which influence them. The general procedures, requirements, challenges and options available for platform decommissioning will be discussed.

Evaluating Decommissioning Options

12:00 PM - 12:15 PM

Dr. Brock Bernstein is an environmental scientist specializing in program design and evaluation and policy development in areas such as regional monitoring, stormwater management, and fisheries management. He has conducted external evaluations of large-scale research and management programs at the regional, state, and national level. Dr. Bernstein has served on National Academy of Sciences committees that focused on marine monitoring, coastal governance, and data integration for global change research. He received his undergraduate degree in English Literature and his Ph. D. in Biological Oceanography from the Scripps Institution of Oceanography.

The OST study found that some potential impacts of decommissioning are likely to be localized and/or relatively minor, although they are of concern to certain managers and stakeholders. These include potential impacts on birds and marine mammals, ocean access, socioeconomic values, and water quality. For birds and marine mammals, the long-term effects of the two main options (complete removal and artificial reefing) are likely to be nearly identical, because both involve removal of the deck and the upper portion of the platform down to 85 feet below sea level. Both options will also remove any surface impediments to ocean access, although the remaining underwater portion of the platform will continue to affect shipping and some commercial fishing activity under the reefing option. Socioeconomic impacts were difficult to predict quantitatively, although it is clear that different user groups will differ in their preferred option. However, it appears that neither option would result in significant effects on the economic outcomes for individual user groups or for the regional economy as a whole.

AB 2503 - Artificial Reefs

During Lunch

John A. Pérez was elected in 2008 to represent the 46th Assembly District. In January 2010, he was elected Speaker of the California Assembly and was sworn in as the 68th Speaker on March 1, 2010. Growing up in the working class communities of El Sereno and Highland Park, John's parents taught him the value of hard work and community service. After attending the University of California at Berkeley, he became active in the Labor Movement, where he spent over 15 years working to create jobs, expand healthcare, and protect workers' rights. Prior to his election to the State Assembly, John served as Political Director for the United Food & Commercial Workers Local 324, and previously served in a similar position for the California Labor Federation. John serves as an elected member of the Democratic National Committee. He has previously served as a Board Member for the California League of Conservation Voters and the Los Angeles Economic Development Corporation.

Numerous studies, including the recent study by the California Ocean Science Trust, have borne out the marine environmental benefits of converting rigs to reefs. AB 2503, authored by Assembly Speaker John A. Pérez, presents a unique opportunity for California to enhance its coastal and marine environment by authorizing the conversion of decommissioned oil platforms in California coastal waters to artificial reefs. Under AB 2503, conversion to an artificial reef could be authorized at any rig which the Ocean Protection Council determines that the conversion would have a net environmental benefit. All existing regulatory and permitting requirements would remain intact. A portion of the cost savings from conversion to an artificial reef compared to full removal, as determined by the State Lands Commission, would be transferred directly from the rig owner to the newly created California Endowment for Marine Preservation, which would award grants to public agencies and non-profits to carry out a range of projects and programs to restore and enhance California's marine fisheries and the coastal and marine environment.

California's Budget from Crisis to Opportunity

During Lunch

Michael Genest opened Genest Consulting in January of 2010 to provide advice, analysis, and advocacy on fiscal and policy issues affecting state and local government. Prior to going into private practice, he served for four years as Governor Arnold Schwarzenegger's chief financial policy advisor in his role as Director of the California Department of Finance. Since Governor Reagan's administration, only one person has served longer in that position. Genest served on Governor Schwarzenegger's transition team and was sworn in as Chief Deputy Director for Budget in the Department of Finance on the first day of the Administration, in November 2003. He also served for six months as Undersecretary of the Health and Human Services Agency and as Chief of Administration at the inception of California's Corrections and Rehabilitation Agency. He received his master's degree from the University of California at Berkeley, Graduate School of Public Policy in 1980 and his Baccalaureate Political Science from San Jose State University in 1978.

California entered the worst recession since the Great Depression without having resolved its underlying structural budget deficit. As a result, the state's General Fund is experiencing the deepest shortfall in its history, with the longer term outlook at least as dim due mostly to the aging of the state's population. As difficult and disruptive as crises of this magnitude are, they also present opportunities. It is at times like this when innovative, outside-the-box ideas like Rigs to Reefs have their greatest chance of becoming reality.

Sustainable Seas: The Vision, The Reality

1:30 PM - 2:30 PM

Dr. Sylvia A. Earle is an oceanographer, explorer, author, lecturer, Explorer-in-Residence of the National Geographic Society, Leader of the NGS Sustainable Seas Expeditions, Council Chair for the Harte Research Institute, Founder of the Deep Search Foundation, and formerly the Chief Scientist of NOAA. Founder of three companies, she serves on various corporate and non-profit boards. A graduate of St. Petersburg College and Florida State University, she holds an M.A. and Ph.D. from Duke University and 19 honorary doctorates. Named as Time Magazine's first "Hero for the Planet" and a "Living Legend" by the Library of Congress, she has authored 175 publications, led more than 100 expeditions, lectured in more than 70 countries, and has more than 100 national and international awards.

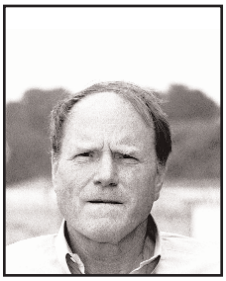
More has been learned about the nature of the ocean in the past century than during all preceding human history, but at the same time, more has been lost owing to the growing impact that people are having on the sea through what is being put into it, and what is being taken out. Less than 5% of the ocean floor has been explored or mapped with the degree of accuracy known for Mars, but enough is known to realize that in the past 50 years, nearly half of the coral reefs have been lost or have seriously declined, 90% of many commercially-fished species are gone and more than 400 dead zones have appeared in coastal zones globally. Rapid global warming, sea level rise, ocean acidification, and other troubling trends require urgent attention. This presentation will consider new technologies and a new era of ocean exploration vital to understand these phenomena, as well as the changes in ocean chemistry, biodiversity and the composition and structure of marine ecosystems, with special reference to the present and future consequences to humankind.

Stakeholder Roundtable Position Statements

2:30 PM - 3:15 PM

Dr. Bill Cooper received his B. S. in chemistry from Allegheny College in 1969. He went to Pennsylvania State University, where he received his M.S. in Fuel Science (Organic Geochemistry) in March 1971 in the origin of coal. After serving in the Army, he ran the water reuse program and funded the first international symposium on water reuse in 1979. He completed his Ph.D. at the University of Miami, 1987, in Marine and Atmospheric Chemistry. In 1997 he moved to the University of North Carolina Wilmington as Chair of the Department of Chemistry and Biochemistry. In 2006, he took his present position as Director of University of California, Irvine's Urban Water Research Center and Professor of Civil and Environmental Engineering. His present research interests include carbon cycling in oceanic and fresh waters, the application of free radical chemistry for the treatment of emerging chemicals of concern and disinfection by-products, and, the application of advanced oxidation processes for the ship-board (oil tanker) control of invasive species. He has published over 250 papers and chapters in books, and edited 5 books.

I believe that 'Rigs to Reefs' serve several complementary purposes and that they are a 'win-win' solution to many of the issues facing coastal communities. In addition to serving as a living reef at the top of the platform (i.e. 60 – 100 feet below the surface) they become marine protected areas for the water column and bottom fish below and in their footprint. They will serve as breeding grounds for the surrounding areas and thus provide for sustainable fishing.



William F. "Zeke" Grader, Jr. was raised in the commercial fishing industry along California's north coast. His father was a fish processor in Fort Bragg and was active in fish politics and a leader in many of the state's early efforts at salmon restoration. Zeke worked in and later managed fish processing plants while in high school, college (B.A. from Sonoma State University) and law school (University of San Francisco). After passing the California Bar and graduating law school, Grader went to work in 1976 for the newly-formed Pacific Coast Federation of Fishermen's Associations (PCFFA). Created just prior to the passage of HR 200, the Fishery Conservation and Management Act (FCMA), PCFFA was intended by its founders to unite local port and fish marketing associations along the coast — giving working fishing men and women a strong and single voice in state, regional, and national fishery issues.

The idea of leaving pieces of decommissioned, deconstructed oil rigs on the seafloor is nothing more than an oil industry scam to get out from under contractual obligations to remove old platforms and clean-up the seabed. Indeed, if one looks closely behind most of those promoting the idea, you'll find oil industry money. The heavy metals, found around offshore drill sites, precludes many rigs from any serious consideration as habitat for food fish.

The pieces of the rigs to be left in a junk pile at the bottom of the ocean are neither the right material, nor probably in the right configuration to create marine reefs. Marginally better than old tires or toilets, the scrapped portions of rigs, like old cars left rotting in a field, will attract species, but not always what is desired.

continued...

True, oil rigs can act as fish attraction devices, but that's mostly when they're intact with above sea level structure, creating shade canopy below that attracts fish. Once the above surface structure is removed, the remaining structure is only marginal habitat. Any "rig-to-reef" only makes sense if enough rig structure is left in place - for sea birds and pennipeds above the surface, and shade for fish beneath the water.

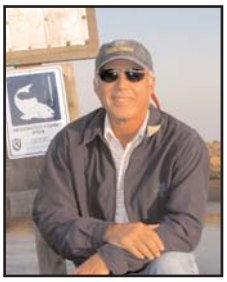
The deals struck allowing the oil companies to leave their debris on the seafloor in return for some contribution to public coffers are hugely one-sided in favor of the oil industry. If the public is to benefit it should demand 100% - not 10%, not even 50% - of the clean-costs.

Don Kent is President of Hubbs-SeaWorld Research Institute—a leading, international marine research institute that is dedicated to ensuring that future generations experience the benefits of a healthy environment by gaining scientific knowledge and finding practical solutions to the most critical conservation challenges facing marine ecosystems and species. Don came to the Institute in 1977 as a SDSU graduate student working on the growth characteristics of striped bass. He has participated on numerous Institute programs studying gray whales, assessing noise effects on animals, minimizing killer whale impacts on fishing operations and, closest to his interest, the development of marine finfish aquaculture. Don has led the Institute since 1998. In that time, the Institute has experienced the largest expansion in its history. Mr. Kent was instrumental in initiating the Ocean Resources Enhancement and Hatchery Program (OREHP), a highly successful partnership of the recreational fishing community, the California Department of Fish and Game, and the California Legislature created to investigate ways to counteract the depletion of California's coastal marine fisheries through stock enhancement.

Two factors have contributed to the decline in fisheries: overexploitation and habitat degradation. Based on studies conducted by academic and federal resource management scientists, it is clear that for over 40 years California's oil production platforms have provided numerous marine species a secure and productive habitat relatively free from exploitation. The result is a remarkable repository of marine life that must have historically covered the coastline of California. As a marine scientist, I am astonished at the profusion of marine life represented at these platforms and have a deep appreciation for their value to the repopulation of habitats along our coast. As a diver and conservationist, I am in awe of the beauty of these structures that rival, if not surpass, any other habitat I have experienced diving. Scientific research supports and our collective respect for life insists that these invaluable habitats be protected for future generations.

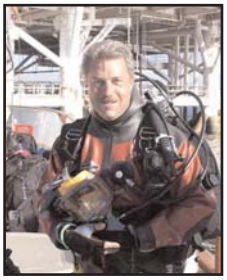
Leila Monroe is a staff attorney in the Oceans Program at the Natural Resources Defense Council (NRDC). Ms. Monroe works at both the state and federal levels on a range of issues including: ocean governance, offshore oil and gas exploration and extraction, siting of ocean renewable energy, marine protected areas, and ocean pollution. Prior to joining NRDC, she worked for T.C. Hoffmann & Associates, the Environmental Integrity Project, and the National Oceanic and Atmospheric Administration's Office of General Counsel for International Law. Ms. Monroe received her law degree from Georgetown University Law Center with a focus on International and Environmental Law. From Georgetown's School of Foreign Service, she earned a Bachelor's of Science in Foreign Service with a focus on International Politics and Security Studies.

NRDC's Oceans Program tracks and analyzes a range of ocean issues including ecosystem based management of the marine environment and the regulation, oversight, and impacts of both conventional and renewable energy offshore. NRDC's Oceans Program Staff Attorney Leila Monroe will highlight key issues of interest as California considers a program to allow for the creation of artificial reefs as an alternative to removal of the oil and gas platforms located off the state's shore. She will highlight lessons learned from NRDC work on federal oversight and regulation of offshore oil and gas activities, particularly reformation of these structures in response to the ongoing Gulf oil spill disaster. For example, considerations in restructuring of the U.S. Minerals Management Services - such as the imperative to ensure separation of revenue collection, regulatory oversight, and production of science - offer important lessons for California.



Tom Raftican is a lifelong recreational angler, boater and diver. He has been actively involved in sportfishing enhancement, education, promotion, and conservation since the eighties, first with United Anglers of California and Santa Barbara SEA then through producing and hosting "South Coast Reel News" and "On The Water" weekly television shows (thru 2001). Today he continues to keep the public informed as co-host on the syndicated, weekly "Fishtalk" radio show and producer and host of the "Reel World Conservation" weekly television show. Tom was elected president of UASC in 1997 through 2008 and has continued to work with the sportfishing community as president of The Sportfishing Conservancy. In addition to these duties Tom represents the recreational angling community on NOAA's Marine Fish Advisory Committee, advising the Secretary of Commerce on fishing issues and is a charter member and Board member of CARE, the California Artificial Reef Enhancement program.

As a sport fisherman and diver for more than a half century I have had the chance to explore an incredible array of marine habitat off the California coast and from the Florida Keys to the Gulf of Alaska and from Maine to Mexico. I have lived in Santa Barbara since the 1980's and have fished, dove, and boated out of the harbor since first arriving. In my experience the marine life on the southern California's platforms is far more diverse and robust than that of any other location I have encountered. Over the past decade, rigorous science has essentially documented what I and my fellow anglers have known all along: platforms are the largest, most prolific reefs off of the Southern California coast and deserve to be treated as such.



Bob Wohlers, is an author, a marine science educator, and underwater photographer. During his nearly 30 years as an Instructional Designer with the Professional Association of Diving Instructors (PADI), Wohlers has assisted with the educational curriculum development for hundreds of recreational scuba diving products. Since receiving a B.S. degree in Marine Science from CSU Long Beach, a secondary Science Teaching Credential at UC Irvine, and an M.A. from CSU Dominguez Hills, Wohlers has taught junior and senior high school marine science and college-level marine science courses in California and Grenada, West Indies. With Current Publishing, Wohlers is the primary subject matter expert and project leader for "Life on an Ocean Planet," a complete high school marine science curriculum. In the mid 1970's Bob began diving the oil platforms off of Southern California. Over the years Bob has dived and photographed practically all the platforms in the Southern California Bight. He has closely followed and been a part of gathering science concerning the ecosystem around the platforms.

The history of constructed reefs in California began in 1958, with the development of a sport-fishing reef off of Paradise Cove in Santa Monica Bay. Over the years, sport fishermen and recreational divers have found California's submerged shipwrecks, constructed reefs and oil platforms a haven of activity – richly inhabited by uniquely large and often rare organisms. Each of California's oil platforms are a "hidden oasis," with reefs beneath their superstructures that are some the most beautiful in the state. With exceptional vertical structures, these reefs mimic the habitats of rare Southern California offshore pinnacles and seamounts. They are valued recreational dive and sport fishing locations. In the Southern California bight, natural hard substrate is rare. It is this hard substrate that provides for fish recruitment, algae growth, and invertebrate colonization. These are the types of reefs divers seek. Oil platforms in the Southern California bight provide an equivalent of approximately 27 football fields of this rare, hard substrate. For divers and the recreational dive industry their aesthetic and commercial value is high. It has been proven that constructed reefs have the ability to enhance the local recreational business economies (scuba diving and sport fishing), hotels, restaurants, and travel infrastructure.

Book Signing with Dr. Sylvia Earle (Optional)

3:30 PM - 4:00 PM

Books may be purchased for $20 each and signed by Dr. Earle.