


Open Letter to the OPC

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To:CNRA COPC Public <COPCPublic@resources.ca.gov>

 1 attachments (22 KB)

Time to Cast Away Stones (AutoRecovered).docx;

Dear OPC Chairperson Wade Crowfoot and fellow OPC Councilmembers;
Please see attached letter 'A Time to Cast Away Stones'

Thank you and the OPC staff for your commitment, perseverance and willingness to share your talents for the greater good and future generations,
my wife, marla jo and i sending you all much love from Morro Bay,

peace, richard

Time to Cast Away Stones

These words are the title of Stephen Kaltenbach's fountain sculpture outside the Sacramento Convention Center where the Pacific Wind Farm Summit was held in May 2023. Carved in the water fountain stones are these three questions; What have we thought? What have we wrought? How are we loving?

How do these questions reflect on the sign of the times? We who live in Morro Bay are at a point in time where our decisions and actions are going to have significant effects not only on our community but to generations of Californians to come.

What have we thought?

. In 1958, Dr. Keeling from the San Diego Scripps Institute, started to record atm.CO₂ (in parts per million ppm) at Mauna Loa, Hawaii and established the Keeling Curve. The atmospheric abundance of CO₂ has increased by an average of 1.88 ppm per year over the past 43 years (1979-2022). This increase in CO₂ is accelerating — while it averaged about 1.6 ppm per year in the 1980s and 1.5 ppm per year in the 1990s, the growth rate averaged 2.4 ppm per year during the last decade (2012-2022). The annual CO₂ increase from 1 Jan 2022 to 1 Jan 2023 was 2.19 ± 0.08 ppm. (Ref. NOAA global trends). Note: (1 ppm translates to 2.13 gigatons of carbon in the atmosphere.)

In 1965, the US president at the time was Lyndon B. Johnson. LBJ's Science Advisory Committee drafted a report titled "Restoring the Quality of our Environment".

'As well as detailing the very direct ways that human society was polluting air, water and land, the report contained an entire section discussing carbon dioxide from fossil fuels, which it poetically described as "the invisible pollutant, The report noted that "through his worldwide industrial civilization, man is unwittingly conducting a vast geophysical experiment," and that this will modify the heat balance of that atmosphere to such an extent that marked changes in climate not controllable through local or even national efforts could occur.'

(From Adam Levy, Knowable Magazine regarding LBJ's Report)

On January 28, 1969, an oil rig off the Santa Barbara CA. coast had a blowout that caused oil to leak out at an estimated rate of 210,000 gallons a day causing Santa Barbara beaches to be befouled with tar and dotted with dead and dying oil-drenched birds. President Nixon visited Santa Barbara and stated; "What is involved is something much bigger than Santa Barbara" he continued, "What is involved is the use of our resources of the sea and the land in a more effective way, and with more concern for preserving the beauty and the natural resources that are so important to any kind of society that we want for the future. I don't think we have paid enough attention to this. We are going to do a better job than we have done in the past," he promised.

On January 1, 1970, President Nixon signed the National Environmental Policy Act (NEPA) into law requiring Federal agencies to assess the environmental effects of proposed major Federal actions prior to making decisions. Also in 1970, then California Governor Ronald Regan signed into law the California Environmental Quality Act (CEQA).

The baby boomer generation was in full swing in the late 1960's & 70's We enjoyed a booming economy, where gas was cheap, cars were big and powerful and college affordable. Meanwhile,

the “invisible pollutant”, atm.CO₂ was about to get supercharged In 1965, what LBJ’s Science Advisory Committee ‘thought’ was going to happen is happening right now in 2023.

What have we wrought?

In 2006, I was invited to the 1st American Society of Mechanical Engineers (ASME) Conference on Water Quality, Drought, Human Health, and Engineering, hosted by the University of Nevada, Las Vegas (UNLV). During the 3-day Conference presenters showed scientific data and projections of an extended drought and intensity and frequency of wildfires in the western part of the United States. The discussion extended to the effects of extreme weather events on human health and society. Also present, were panelist representing some innovative technology to help adapt to the new projected norms. This inspired me to write the ‘Blue Carpet Treatment Water Management plan’, an oceanic care plan that elevates the value of natural Blue Carbon sinks and would establish the first internationally recognized BAP (Biodiversity Action Plan) in the US, to be located right here in the Morro Bay Estuary. In 2010 The Blue Carpet Treatment Water Management plan became part of President Obamas White Papers.

In the past few years, Californians have witnessed weather whiplash in the form of urban heat zones, extended drought, wildfires, flooding from atmospheric rivers causing overburdened waterways to overflow into communities and surcharging of storm and sewer collection infrastructure. What the boomer generation and previous industrial age generations wrought on the future generations cannot be undone. Meanwhile, the generations following us boomers are facing an existential crisis that we must take some accountability for. The simple facts are that the global atm.CO₂ is rising at such a rate, that the United Nations IPCC report states that we will almost certainly sail past the semi-safe 1.5 C limit set in 2015 by the Paris accord. With the ocean absorbing about 30% of the atm.CO₂ released in the atmosphere, the chemistry of the ocean is changing resulting in Ocean Acidification (OA). So, what have wrought will be paid for by those we leave behind.

How are we loving?

. In 2004 Governor Schwarzenegger signed the California Ocean Protection Act (COPA) which created the Ocean Protection Council (OPC). My wife and I have attended OPC meetings since 2005 and one thing that has remained constant was science-based decision and policy making actions. In the past few years, Governor Newsom responded from one end of the State to another witnessing firsthand the devastation to communities caused by prolonged drought, wildfires, and flooding. Under Governor Newsom’s leadership the OPC have integrated the social implications of extreme weather events on public health and safety into science driven research and development policy recommendations.

The Offshore Wind Farm (OWF) endeavor is much bigger than just achieving a decarbonizing goal for California. It is bigger than facilitating a sustainable active funding source for coastal communities to address the challenges of climate change; it is a way for us to start healing as a state and a country. We need for the California Republicans to focus on promoting favorable business policies for California’s renewable energy program. The California Demarcates must understand the urgent need for action and should support the Governor’s efforts to expedite projects that will help get California off fossil fuel dependency; in addition, focus on creating public-private partnerships that will help fund the social needs of their respected communities.

So, how are we loving?

With respect to warnings based on climate science, history shows that the boomer generation actions have not been what I would call very loving when it comes to considering the generations that follow. Our continual addiction to fossil fuels and the resulting wars and global environmental degradation are only compounded by a willful ignorance to the sign of the times. We have arrived at a crossroads in time where united we can move towards a direction where innovation, collaboration and cooperation can foster hope or we can stagnate and bog down any new progress with policies that ensure that those vested in the status quo continue to prosper. In the past, Morro Bay had sustainable funding from a carbon polluting, once thru cooling Power Plant; now, Morro Bay is poised to play a key role in helping California lead towards a renewable energy future. That future would bring an active, sustainable funding source to the city in the renewable energy market. Morro Bay being a safe harbor should provide facilities for OWF maintenance personnel and be a hub for OWF First responders in event of emergencies.

So, my fellow baby boomers, what have we left behind? One thing i do know we have not left behind, is the luxury of time for our kids to act?

Richard E.T. Sadowski

Home Front EJ, Morro Bay



August 10, 2023

Dear Ocean Protection Council Members,

The University of Southern California (USC) Sea Grant and California (CA) Sea Grant Programs are pleased to share that we have received just over \$5.2 million in funding from the State Water Resources Control Board (State Water Board) to fund four new projects to give the state a greater understanding of the human health risk and ecological risk due to deep ocean DDT+ deposits (i.e., ocean disposal sites, other coastal sources, and DDT processes) in the Southern California Bight. We thank the Ocean Protection Council for its continued attention to the DDT+ issue.

“The Los Angeles Water Board is encouraged to see the California Deep Ocean DDT+ research proposals selected for funding by the State Water Board and Sea Grant,” says Los Angeles Water Board Chair, Norma Camacho. “The Los Angeles Region and Southern California are blessed with productive and important ecosystems, including the Southern California Bight. However, the more than 20 million people and treasured wildlife who call this place home are burdened with a long legacy of DDT pollution. The completion of these projects will help us understand the human health risk and ecological risks due to deep ocean DDT+ deposits and find the best ways to restore our environment and protect the people who live here.”

DDT is an insecticide banned in 1972 for its harmful impacts on wildlife and potential carcinogenic effects on humans. Recent field surveys have renewed interest in research to understand the extent, impacts, and risks of deep ocean DDT in the Southern California Bight, particularly as new methodologies have revealed a greater diversity of DDT breakdown compounds and related byproducts (hereafter referred to as “DDT+”) of unknown impacts and extent.

In response, USC and CA Sea Grant Programs conducted a community-driven research needs assessment in 2022, engaging diverse perspectives from across the state, culminating in [A Deep Ocean DDT+ Research Needs Assessment for the Southern California Bight](#) in January 2023 and a public-friendly [storymap](#) of the results. The State Water Board, in coordination with CA and USC Sea Grants, issued a [request for proposals](#) in January 2023.

“This work is challenging, but timely and necessary,” says Dr. Lian Guo, CA Sea Grant’s Research Coordinator. “Conducting research in deep ocean environments requires cutting-edge laboratory techniques and technology, but the chosen projects have collaborative and multi-institutional designs that enable them to tackle a significant amount of work in just 18 months.”

These projects join a portfolio of research being conducted to assess the scope and impacts of deep ocean disposal of DDT+ in Southern California. The new research projects, focused on state information and management needs, will complement ongoing [federally-funded research at Scripps Institution of Oceanography](#).

“These four awarded projects will provide a critical foundation for future work. The complexity of this challenge necessitates continued researcher and community involvement, as well as sustained research funding, to address the full suite of deep ocean DDT+ research needs outlined in our report,” says Dr. Amalia Almada, USC Sea Grant’s Science, Research & Policy Specialist.

The four awardees of the 2023-2024 California State Funding for Deep Ocean DDT+ are:

[Foundational Research for Deep Ocean Dumping of DDT+ Wastes: How much is out there, where is it, and what is it doing today?](#)

Project Lead: David Valentine, University of California Santa Barbara

Co-PIs: Eunha Hoh (San Diego State University); Nathan Dodder (San Diego State University)

Summary: Recent analysis has confirmed that DDT+ bulk waste was not contained in barrels and that some was likely “short dumped” between the California mainland and designated legal dumpsites in the San Pedro and Santa Monica Basins. Through field, laboratory, and analytical efforts, Valentine and collaborators will determine the quantity and spatial extent of this pollution, and the potential for degradation, movement, or interaction with living organisms. The research team will quantify the diversity of DDT+ products within sediment core samples and model timescales of DDT+ degradation, as well as mechanisms of transport from sediments.

Project Administrator: USC Sea Grant

[The production and mobility of DDT metabolites within sediments as controlled by the local diagenetic environment](#)

Project Leads: William Berelson, University of Southern California

Co-PIs: Alex Sessions (California Institute of Technology); Hope Alisa Johnson (CSU Fullerton); Lisa Collins (Santa Monica College)

Summary: Currently, there is no routine analytical method for sensitively measuring concentrations of most of the known DDT+ breakdown products and related byproducts. Berelson and partners will develop an identification and quantification method for at least 23 DDT+ compounds at very low concentrations at various ocean depths. Berelson will also investigate whether “fingerprinting” (‘isotomics’) of DDT sources is possible—in other words, this work will reveal if it will be feasible to trace DDT contamination from marine animals back to exact sources of DDT contamination on the seafloor. Berelson will weave the various threads of this project together into a model depicting DDT+ migration in deep water sediments. The produced model and novel analytical techniques will be critical for accurate and efficient future risk assessments for human and ecological health.

Project Administrator: USC Sea Grant

Assessment of Highly Mobile Coastal Elasmobranchs as Vectors of DDT to Low-Income Communities

Project Lead: Christopher Lowe, California State University Long Beach

Co-PIs: Varenka Lorenzi (California State University Long Beach), Ryan Freedman (NOAA Channel Islands NMS), Kady Lyons (Georgia Aquarium)

Summary: Scientists have known for decades that DDT accumulates in fatty tissues of organisms, and this accumulation magnifies higher up the food web. However, studies to date have focused on high-market-value fish, while comparatively less information exists about lower-market-value commercial species or subsistence fishing targets, like smaller sharks and rays, despite the fact many of these species spend significant time near DDT+ contaminated sediments. This project will quantify DDT+ contaminants in the tissues of Angel Sharks, Bat Rays, and Leopard Sharks in southern California; determine the spatial distribution of these species using satellite and acoustic tags to understand habitat use near DDT-contaminated sites; and determine the potential exposure risk from consumption of these species by at-risk or low-income communities. This project will integrate partnerships with anglers and a nonprofit called Heal the Bay that leads a local Angler Outreach Program.

Project Administrator: CA Sea Grant

Hazard assessment of deep ocean DDT disposal: Defining biomagnified DDT+ chemical profiles and investigating the health impacts on sentinel wildlife species and humans

Project Leads: Eunha Hoh, Dr. Karilyn Sant, and Nathan Dodder, San Diego State University

Co-PIs: Rebecca Duerr (International Bird Rescue), Pádraig Duignan (The Marine Mammal Center), Alissa Deming (Pacific Marine Mammal Center), Christopher Tubbs (San Diego Zoo Wildlife Alliance); Myra Finkelstein (University of California Santa Cruz), Frances Gulland (UC Davis)

Summary: Relatively high levels of approximately 45 DDT+ compounds were recently identified in southern California marine mammals. However, data on the unique exposure and health risks near the deep ocean DDT+ sites are particularly limited. Hoh and project partners will examine southern California wildlife to assess their current levels of DDT+ and whether these change over time or by geographical distance, and whether there are correlations with health issues. Overall, the team aims to examine the reproductive and developmental toxicity of DDT+ using model systems to help assess the risks to human health. The project team plans to further engage Indigenous high school students in the research project and develop a children's book about deep ocean DDT+.

Project Administrator: CA Sea Grant

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USC and CA Sea Grants are part of a national network of 34 university-based programs administered by the National Oceanic and Atmospheric Administration.

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