BIG OIL: ALIVE AND WELL AND OUT OF CONTROL

By Taffy Lee Williams

"One gallon of oil pollutes one million gallons of water." (Clean Water Education partnership http://www.nccwep.org/help/did_you_know.php)

In its unrelenting quest for Big Profits, the oil/gas/fracking industry has lobbied and recently won a string of troubling victories. It can't be denied that this feels like a war. The theatre of action? Two battles are raging over the NY/NJ Bight, more over the Atlantic Coast, Outer Continental Shelf, and even parts of the Arctic Ocean, all areas rich with marine life, especially cetaceans. Meanwhile, the long-term struggle for survival continues after the crippling BP disaster in the Gulf of Mexico.

BIG GAS and LIQUIFIED NATURAL GAS

Liberty Natural Gas - a company with nameless officials and obscured origins, has applied for a permit to build a Liquified Natural Gas import terminal at Port Ambrose in the New York/New Jersey Bight. The Bight is the triangular-shaped ocean region of the eastern Atlantic continental shelf, specifically from Cape May, NJ to Montauk, NY, an area that includes Sandy Hook and Raritan Bay, Gateway Nat'l Rec. Area, the lower Hudson River and NY Harbor.

> "Port Ambrose is a deepwater port consisting of a submerged buoy system for natural gas deliveries that will be located in federal waters approximately 19 miles from the New York shore. Liquefied Natural Gas (LNG) supplies will arrive at Port Ambrose via specially designed Shuttle & Regasification Vessels (SRVs). Once the SRV is connected to the submerged buoy system, the LNG will be re-gasified on board and natural gas will be transferred into a new twenty-two mile subsea pipeline that will connect offshore into the existing Transco Lower New York Bay Lateral pipeline serving Long Island and New York City." (http:// portambrose.com/project-description/)

Here are the US Coast Guard/US Maritime Administration's DEIS impact assessments:

> "Proposed Action: Water quality impacts during construction would consist primarily of short-term increases in turbidity associated with bottom sediment disturbances during proposed Mainline lowering/backfilling and during the installation of the STL [submerged turret loading] Buoy systems. Other short-term minor water quality impacts would be anticipated in association with routine discharges from the construction vessels and the discharge of proposed Mainline hydrostatic test water at the PLEM locations in federal waters. Operation of the proposed Port facilities would be expected to result in short-term minor adverse water quality impacts resulting from sediment disturbance and turbidity caused by riser pipe movement and STL Buoy anchor chain movement, as well as accidental releases of petroleum products, LNG, and/or other chemicals.... Vessels used during decommissioning would have routine vessel discharges and the potential for accidental releases, but since the proposed Mainline would be abandoned in-place, the extent of the impacts would be over a much smaller area than that associated with the original construction." (DEIS ES21: Executive_Summary_Port_Ambrose_ DEIS-Volume_1-3.pdf)

There are many problems with this project. The NY Bight has served as a dumping ground for roughly 200 years, receiving raw sewage, garbage, contaminated dredgings, sewage sludge, acid waste, incinerated toxic waste, and other nasty chemical refuse conveniently dumped from local industries.

In 1984, with eight ocean dumpsites, the Bight was the "Ocean Dumping Capital of the World." The eight dumpsites included those for contaminated dredged spoils, sewage sludge (two sites), acid waste, wood incineration, construction rubble, incinerated toxic wastes, and industrial wastes. (https://cleanocean. wordpress.com/bight/)

What sediments will be churned up during the 22 mile pipeline's construction?

> "Some pollutants derive from past dumping, which is documented in the sediment by persistent compounds such as polycyclic aromatic hydrocarbons (PAHs) and dicarboxylic acids. Sites located closer to the Dredged Material Dump Site are richer in hydrocarbons, whereas sites located closer to the Sewage Sludge Dump Site are richer in plasticizers (dicarboxylic acids).... Styrene (straight-chain hydrocarbon) and plasticizers present in

the sediment samples originate from sewage sludge. High amounts of PAHs (polycyclic aromatic hydrocarbons) originate from both ash and petroleum.... The highest concentrations of organic matter and fine-grained sediment were found in cores located close to Sandy Hook and in Hudson Shelf Valley. The sediment samples are predominantly sandy with only a minor amount of silt, clay and gravel. The solid particles of the waste such as ash, synthetic fibers, pieces of bricks, porcelain, plastic, and glass introduced into the sediment changed its natural texture. Most of the sediment samples represent a reducing to strongly reducing environment causing the depletion of oxygen and of aquatic life as well as the increase in time of pollutants decomposition. The presence of hydrogen sulfide makes the environment toxic for most of the biota. Some of the detected hydrocarbons are polycyclic aromatic hydrocarbons (PAHs) which have been shown to be carcinogens and/or mutagens." (Moch Aleksandra; Friedman Gerald M., 1999: The impact of organic-rich waste released into New York Bight sediment. Northeastern Geology and Environmental Sciences 21(1-2): 49-101)

Construction at this site and dredging through 22 miles of seabed for the pipeline will resuspend the settled toxins, causing them to migrate throughout the region's waters creating a hazard to biological life. This should not be considered a minor impact, as the detriments of the materials found in these sediments is well-known. Particulates churned up from sediments will be carried throughout the Bight and beyond to wreak an unknown but anticipated havoc.

IS THIS ABOUT INCREASING FRACKING?

Opponents ask why we need an LNG import terminal in the first place, citing a falling demand for LNG, and more than adequate supply here in the US from fracked gas. Prevailing suspicions are that after construction the port will be converted (with an amended application) into an export terminal. As an export facility, Port Ambrose will send LNG to foreign markets for higher prices. The source: American fracked gas! If LNG is exporting fracked gas there will be a rise in demand, i.e., increased domestic fracking! Although there is plenty of resistance to an LNG import terminal, there would be even more against an export facility dependent on increased fracking in the US! Building Port Ambrose as an import facility with a quick paper conversion to export, will cause a rise in demand for fracked gas, as domestic gas is liquified and sent oveseas. This in turn will cause domestic gas prices to rise. No doubt about it, this LNG port represents a big win for Big Oil and Big Gas.

What will happen to the 26 cetaceans species, the fisheries, the marine life abundant in these waters? How will they cope with the admitted "routine discharges" and "accidental releases of petroleum products, LNG, and/or other chemicals"? These threats are unacceptable. It is well known that ~half of the oil pollution in our oceans originates from these "minor" operation accidents, infrastructure (pipeline, valve, fittings, joint) failings as well as the ballast water exchanges that are "routine" (whether they are legal or not). If one gallon of oil contaminates one million gallons of water, and "one quart of motor oil can create an oil slick two acres in size" (ibid), our shoreline, the local fisheries, the marine life, from the plankton to the whales will writhe through an increasingly sickly soup that will certainly result in a new and very large dead zone - right at the place that has been the livelihood, economic life and beach playground of tens of millions of people living on the east coast. This one facility will cause an economic failure as the effects of operation hit the beaches of New Jersey and New York, including Atlantic City, Asbury Park, Wildwood, Cape May, the south shore of Long Island and the Hudson River coastline.

The amount of pollution generated by this project is so great it defies calculation. 3.5 million gallons of chemically treated saltwater will be discharged into the Atlantic Ocean just for the purpose of testing the integrity of the pipeline! As ocean water becomes increasingly polluted, dead zone(s) that grow in size are generated. This pollution should not be tolerated by the USCG, MARAD, or any of the cooperating agencies as it will lead to ruin. What about the marine mammals, seabirds, wildlife along the shores and the all-important fisheries? While the DEIS tells us effects will be short term and minimal, the public isn't buying it.

To learn more visit http://www.cleanoceanaction.org/ and http://saneenergyproject.org/port-ambrose-liquefied-natural-gas-off-long-islands-shores/

MORE ASSAULTS AT THE JERSEY SHORE

While activists were busy fighting the guns of Big Oil on fronts that include Port Ambrose and the Arctic Ocean the National Science Foundation quietly granted research funds to Columbia University's Lamont-Doherty Earth

Observatory (LDEO), to work with Columbia, the University of Texas and Rutgers University to probe seabed sediments from the past 60 million years via seismic airgun arrays that blast low frequency sound as much as 20 miles into the seafloor. Although the project's directive is to uncover evidence of sea level fluctuation and climate change, the data retrieved will also locate deep oil and gas deposits, and even methyl hydrates. The airgun arrays will operate for 30 days without ceasing, that is for 720 hours just 15 miles east of Barnegat Bay. Legal challenges and equipment failure put a welcome end to the project in the summer of 2014. However, despite intense objections from those dependent on the local marine-based economy, and even the NJ state officials, a U.S. District Court in Trenton denied the N.J. Department of Environmental Protection's application to temporarily stop the seismic survey. Unfortunately for the whales, sea turtles and fish that either call this area home or routinely traverse through it the project is now planned to begin in the summer of 2015.

Interestingly, this isn't the first time that the Lamont-Doherty Earth Observatory has been the focus of protest. The NSF and its ship, Maurice Ewing, are not unfamiliar with seismic and sonar mapping controversies. In 2002 the NSF was sued by the Center for Biological Diversity as the vessel was conducting seismic mapping in the Gulf of California and whales were found dead. A judge ruled that the sound blasts disrupted marine life in the ocean. (http://www.reefrelieffounders.com/drilling/ 2014/03/20/several-articles-about-seismic-testing-in-gulf-of-california-and-beached-whales-including-lawsuit-to-stop-nsf-owned-ship-from-testing/) Seismic testing has been implicated in a number of mass whale strandings during seismic exploratory and mapping activities around the world, including 100 melon-headed whales in Madagascar in 2008, and pilot and minke whales in New Zealand, Australia, West Iceland and Scotland in 2013. (http://news.mongabay.com/2013/ 0925-sonar-testing-whale-stranding.html) and http:// www.huffingtonpost.com/candace-calloway-whiting/terrifying-and-destructive-to-whales_b_3901738.html

The Marine Mammal Commission weighed in as well, noting that the the NSF's "take" numbers for marine mammals were underestimated by the applicants:

> "Enumerating takes for surveys in a small area
> To determine the numbers of marine mammals that could be taken incidental to the proposed geophysical survey, LDEO multiplied the total ensonified area of 2,502 km^2 (which includes a 25 percent contingency) by the applicable densities. However, LDEO would be conducting the survey, consisting of 4,900 km of tracklines (spaced 150 m apart), in an area of 12 by 50 km. The survey would occur in that small area for approximately 30 days, 24 hours per day. At the March 2013 meeting, the Commission discussed with NMFS and the other relevant entities the fact that a simple area*density method is not appropriate in such circumstances. Rather, the applicant should be determining the total ensonified area in a given day, which then should be multiplied by the number of survey days (30) and the applicable densities. Otherwise, the method LDEO used in the current request (and has used in the past) very likely underestimated the numbers of marine mammals that could be taken. Therefore, the Commission recommends that NMFS require LDEO to estimate the numbers of marine mammals that could be taken based on the total ensonified area in any given day multiplied by 30 and the applicable densities." (Marine Mammal Commission, Letter to NMFS/Ms. Jolie Harrison, Appendix G, Page 6, 31 March 2014.) https://www.nsf.gov/geo/oce/envcomp/nj-seismic-research/appendix-g-nmfs-iha-public-comments.pdf

How many whales have to strand and die at the hands of the scientists at the NSF, Columbia U, Rutgers U, and the U Texas? The next Big Question: will Big Oil step in, and profit from this marine-devastating project, and be granted access to the NSF research data? Let's see how the NSF answers that:

> "NSF will launch a Public Access Initiative that will make the results of NSF-funded research broadly available with minimal barriers. NSF's public access policy will accelerate progress in scientific research, encourage citizens to become scientifically literate, and foster creative partnerships with the private sector." https://www.nsf.gov/about/budget/fy2014/ pdf/45_fy2014.pdf

For more on this topic, visit http://www.cleanocean action.org/.

OBAMA'S BIG GIFT TO BIG OIL: THE ATLANTIC OCEAN OUTER CONTINENTAL SHELF AND THE ARCTIC

This one just rips the heart out of any sense of hope for our future. Well, dead zones and dead wildlife be damned, Obama has given Big Oil its coveted dream: the Atlantic Ocean's Outer Continental Shelf. Then he gave Big Oil a bonus, well, just for being Big Oil: parts of the Arctic.

It would be easy to rant about the hundreds of thousands of marine animals at risk, including whales, dolphins, seabirds, sea turtles, fish and nektonic and planktonic species that will be impacted to death by living in an ocean permeated with the oil exploration and extraction industry. Or to ramble on about the demise of marine-based local economies, fisheries, the commercial and recreational use of the vast areas of ocean that will become a canvas dotted with oil rigs... but that would be overstating the risks. Or would it?

Let's consider the expected impacts from the industry. There are a broad range of activities, from seismic exploration that blasts the seafloor with high-decibel low frequency sound and can drive marine mammals out of the water, to routine maintenance and operations that are considered "minor" and are ignored by regulators and environmental impact statements despite their serious impacts. Various stages of well drilling, leaking infrastructure, testing pipelines (then releasing millions of gallons of polluted water), typical vessel ballast water exchange (whether legal or not), accidents that get little or no publicity, waste water laden with drilling fluids, runoff water from platform operations, pipeline and flowline leaks, leaking storage tanks, well failures and of course, transportation. Even more frightening, the prospect of a BP-like Deepwater Horizon blowout accident along the Atlantic Coast that will surely decimate wide swaths of the shoreline. Seems a lot to worry about; seems there's a great deal at stake.

Since the Interior Department's announcement that it would open the mid and south Atlantic coasts to oil and gas exploration, a coalition of 75 scientists called on President Obama to reject the plan outright.

> "Opening the U.S. east coast to seismic airgun exploration poses an unacceptable risk of serious harm to marine life at the species and population levels, the full extent of which will not be understood until long after the harm occurs. Mitigating such impacts requires a much better understanding of cumulative effects, which have not properly been assessed, as well as strict, highly precautionary limits on the amounts of annual and concurrent survey activities, which have not been prescribed. To proceed otherwise is simply not sustainable." http://docs.nrdc.org/wildlife/files/wil_15030401a.pdf

The scientific community dismissed the assessment of negligible impact on marine animals as not based on sound science. Speaking of airgun arrays:

> "Airgun surveys have an enormous environmental footprint. For blue and other endangered great whales, for example, such surveys have been shown to disrupt activities essential to foraging and reproduction over vast ocean areas. Additionally, surveys could increase the risk of calves being separated from their mothers, the effects of which can be lethal, and, over time, cause chronic behavioral and physiological stress, suppressing reproduction and increasing mortality and morbidity. The Interior Department itself has estimated that seismic exploration would disrupt vital marine mammal behavior more than 13 million times over the initial six-to-seven years, and there are good reasons to consider this number a significant underestimate.
>
> "The impacts of airguns extend beyond marine mammals to all marine life. Many other marine animals respond to sound, and their ability to hear other animals and acoustic cues in their environment are critical to survival. Seismic surveys have been shown to displace commercial species of fish, with the effect in some fisheries of dramatically depressing catch rates. Airguns can also cause mortality in fish eggs and larvae, induce hearing loss and physiological stress, interfere with adult breeding calls, and degrade anti-predator response: raising concerns about potentially massive impacts on fish populations. In some species of invertebrates, such as scallops, airgun shots and other low-frequency noises have been shown to interfere with larval or embryonic development. And threatened and endangered sea turtles, although almost completely unstudied for their vulnerability to noise impacts, have their most sensitive hearing in the same low frequencies in which most airgun energy is concentrated." (Ibid)

Disrupting marine mammal behavior 13 million times for the initial 6 or 7 years? Believe it or not, this is acceptable to the Obama government.

SPEAKING OF OIL SPILLS: DOLPHIN DEATHS CONTINUE AT SITE OF THE BP GULF OIL DISASTER

As we ponder the future of the Atlantic coast our thoughts return to the Gulf of Mexico, 2010, the site of the largest oil spill in US history. What has been so quickly forgotten today? How could the BP disaster happen? Could it happen again?

> "The BP disaster has exposed the insidious and epidemic collusion between big business - in this case the oil industry - and the US government to essentially nullify the laws that impede their profits and progress. In order to save time, BP skipped certification of the blowout preventer, which was found to have design flaws, leaks in the hydraulic system and even a dead battery. A litany of deep sea equipment failures and faulty wiring plagued the rig, and conflicting pressure test results indicated poor pipe integrity. BP failed both to redirect the flow of flammable gases and remove drilling fluids necessary for accurate readings. (Gulf Oil Rig Plagued by problems, Probe Finds. CBS News. May 12, 2010. http://www.cbsnews.com/stories/2010/05/12/national/main6476337.shtml) Where was oversight in the face of so many problems on the rig, and in light of BP's dismal safety record? (BP has been fined by OSHA 760 times!) Now, despite the resulting ecological nightmare in the gulf, fearing little government interference, BP is choosing to simply walk away. With so much at stake, the future health of the gulf and all its residents who must deal with the remaining 4 million barrels of oil dispersed through the region, the abandonment should be treated as one of the highest level crimes against the American people." (Whales Alive, Vol. XIX No. 4 October, 2010.)

We are being asked to trust a industry that showed its true parasitical nature during the horrendous blowout of the Deepwater Horizon that poured 5 million barrels of oil and 2 million barrels of Corexit, an equally toxic "dispersant" into the gulf. We are being asked to trust employees of a company that functions through deception and lies. One former BP spill engineer was charged with obstruction of justice after he deleted text messages to his superiors warning that the well was leaking 630,000 gallons of oil per day, three times the amount BP had publicly stated, 210,000 gallons per day. (http://www.theguardian.com/business/2013/dec/18/bp-oil-spill-engineer-obstructed-justice-text-messages) We will never know how much oil actually leaked into the Gulf of Mexico, thanks to BP. Yet this is an industry actually protected by the government. One recalls the news blackout of information, while officials forbid scientists from publicly discussing results of investigations into the impact of the BP oil spill!

The gulf oil spill is not over. Over 1300 dolphins, including young and aborted fetuses, have died in the gulf since February 2010. Dolphins show lung and adrenal lesions consistent with exposure to petroleum products. One study has shown that clusters of dolphin deaths have occurred in places affected by long term and heavy oil contamination in the gulf. http://www.nytimes.com/2015/03/03/science/gulf-of-mexico-turns-deadly-for-dolphins.html?partner=rss&emc=rss&_r=1 Gulf of Mexico Turns Deadly for Dolphins

The BP oil spill thoroughly unmasked how environmental laws and public health and safety mean little to Big Oil. Facing up to $17.6 billion in fines under the Clean Water Act, BP has been whining that it cannot afford the penalty, despite pulling in $3.6 billion in profits per quarter in 2014! (http://www.bp.com/en/global/ corporate/press/press-releases/bp-second-quarter-2014-results.html). The federal judge assigned to the case came down hard on BP, stating that gross negligence and willful misconduct resulted in the massive oil spill.

> "Barbier said that drilling rig owner and operator Transocean and oil services giant Halliburton were also "negligent" in the events that led to the blowout of BP's Macondo well that set fire to Transocean's Deepwater Horizon rig, killed 11 workers and triggered the largest oil spill in U.S. history. Barbier apportioned 67 percent of the fault to BP, 30 percent to Transocean and 3 percent to Halliburton. Transocean last year agreed to pay the government $1 billion to settle its Clean Water Act liabilities related to the oil spill, and it paid an additional $400 million in criminal penalties. But Barbier had harsh words for the company, saying that it "was aware that its crews lacked training about the proper use of diverters" that should have directed dangerous hydrocarbons away from the rig. He also said that Transocean had not lined up the diverter properly." (http://www.washingtonpost.com/business/economy/bps-gross-negligence-caused-gulf-oil-spill-federal-judge-rules/2014/09/043e2b9452-3445-11e4-9e92-0899b306bbea_story.html)

Who could forget the image of the sperm whale and its calf swimming through an orange, boiling sea laden with thick, burning oil and smoke billowing, as nearby flames whipped out to the skies. The gulf was on fire, and whales and dolphins were swimming through it. Heartbreaking scenes still haunt us: pelicans covered head to toe with oily brown goo, the oil-bathed fish gasping its last breath on the beach, the marshes bleached black with oil. Where will the birds go now, where will they find food? We grieved as we wondered how whales and dolphins or birds could breathe the petrochemical-fumed air, how they are surviving now. What will become of the Atlantic coast?

Today, bottlenose dolphins and sea turtles are among the many species struggling to recover, dying in record numbers. Although BP has left the "scene of the crime," oil permeates the marshes and beaches, while some of the "missing"

oil - some 10,000 gallons - has been found on the seafloor of the Gulf of Mexico. Studies have shown dolphins swimming through oiled waters are anemic and underweight, with signs of lung and liver disease.

—An oil chemical from the spill has been shown to cause irregular heartbeats in the embryos of bluefin and yellowfin tuna. That's a critical stage of development for the fish, so there's a lot of concern that the damage could cause heart attacks or deaths, Inkley said. (Related: "Odd Animal Deaths, Deformities Linked to Gulf Oil Spill?")

—Loons, birds that winter on the Louisiana coast, are carrying increasing concentrations of toxic oil compounds in their blood.

—Sperm whales that swam near the BP well have higher levels of DNA-damaging metals in their bodies than in the past. The metals in their bodies, such as chromium and nickel, are the same ones that were present in the well. http://news. nationalgeographic.com/news/2014/04/140408-gulf-oil-spill-animals-anniversary-science-deepwater-horizon-science/

We can expect to see the consequences of this spill for decades.

Are we really supposed to trust an industry rife with negligence, lack of compliance with environmental laws, and blatant criminal activity? How can one believe this kind of willful disregard is not systemic, not typical throughout the industry? BP's blowout showed us with certainty that Big Oil cannot be trusted. Some have chosen to learn this lesson - some except, it appears, our government's highest officials. Knowing Big Oil's record and what's at stake, the Obama Administration, the Interior Department, the Bureau of Ocean Energy Management, et al, prefer to go ahead anyway and open the Atlantic Ocean and parts of the Arctic to Big Oil. With governance like this, can we even hope to win this tragic and so unnecessary war?