The Gulf of Mexico (GOM) has a long history of feeding and fueling America through energy and fisheries production. Let's keep it going!

> Help maintain the GOM as a superior province delivering America's Energy and Seafood Security by improving regulations to assure offshore deepwater responses are efficient, effective, and aligned with Americas National Response Priorities (§40CFR300.317); 1) Safety of human life, 2) Securing the source and 3) Use all necessary containment and removal tactics.

> > This can be accomplished by reducing bureaucratic challenges and allowing the Federal On Scene Coordinator (FOSC) to grant TEMPORARY APPROVAL for subsea dispersant injection for up to 5 days. This will allow the capping stack to be installed and the well to be shut-in, thus securing the source without delay!





## National Oceanic and Atmospheric Administration - NOAA Department of Commerce

"Dispersants work by breaking up oil slicks into lots of small droplets, similar to how dish detergent breaks up the greasy mess on a lasagna pan. These tiny droplets have a high surface area-to-volume ratio, making them easier for oil-eating microbes to break them down (through the process of biodegradation). Their small size also makes the oil droplets less buoyant, allowing them to scatter throughout the water column more easily."

## Florida Department of Environmental Protection

"Chemical dispersants remove the oil from the surface of the water and into the water column. Once in the water column, the oil is diluted to less harmful levels, and eventually is used as a food by bacteria. Birds, marine mammals, turtles, and Florida's sensitive coast are protected when oil is removed from the water surface. Chemical dispersants do not cause the oil to sink but remain in suspension in the water column."

The chemical dispersants used today are generally not as toxic as the oil itself and, with adequate dilution, will not harm aquatic life. As an added precaution, chemical dispersants are not applied to shallow nearshore waters, mangrove areas, marshes, or waters over coral reefs and seagrass beds.

## Effects of Crude Oil/Dispersant Mixture and Dispersant Components on PPARγ Activity in Vitro and in Vivo: Identification of Dioctyl Sodium Sulfosuccinate (DOSS; CAS #577-11-7) as a Probable Obesogen

"We investigated the obesogenic potential of COREXIT 9500-dispersed MC252 crude oil and identified the major COREXIT component, dioctyl sodium sulfosuccinate (DOSS), as a likely obesogen. In addition to it being a major component of the dispersant COREXIT, **DOSS is widely used in pharmaceuticals and personal care products** [U.S. Department of Health and Human Services (DHHS) 2014; Environmental Working Group (EWG) 2015a]."

## Proceedings from the National Academy of Sciences - PNAS Science in support of the Deepwater Horizon response - December 3, 2012 |109 (50) 20212-20221

"Arguments in favor of subsea application of dispersants included: i) direct injection would maximize the exposure of oil to dispersant before it significantly weathered and emulsified with water, ii) compared with surface applications to slicks, significantly less dispersant would be required to achieve the same goal and iii) potential exposure of spill response workers to both airborne dispersants from surface application and volatile organic compounds associated with spill could be minimized.

Thousands of water and sediment samples from near-shore and offshore were collected and tested for major dispersant constituents, such as butoxyethanol, dipropylene glycol N-Butyl ether, propylene glycol, and dioctyl sodium sulfosuccinate (DOSS). Few water and sediment samples showed detectable levels. None of the water samples showing detectible levels exceeded EPA's aquatic life benchmarks.

The EPA conducted toxicity tests on eight dispersants listed on the NCP (National Contingency Plan) product schedule. Results indicate that none of the dispersants tested displayed biologically significant endocrine-disrupting activity; dispersants alone were less toxic than dispersant-oil mixtures. Corexit 9500A was generally similar to toxicities of other available dispersants.

After seeing images of oil and gas flowing, many people had difficulty believing that oil was disappearing rapidly from open waters, fish could metabolize PAHs (Polycyclic Aromatic Hydrocarbons), and the seafood testing was reliable.

The lack of DOSS (dioctyl sodium sulfosuccinate) in tested seafood (fishes and crustaceans) seems to support our expectation that either dispersant degraded rapidly, or it was metabolized quickly by exposed animals."

