

MYTH VS. REALITY — THE TRUTH ABOUT FRACKING IN FLORIDA



Numerous myths regarding oil drilling in Florida have spread since unconventional oil extraction, including fracking, became a key issue for the state in 2014. The following is intended to separate reality from the myths.

Myth: Unconventional oil extraction only affects communities with oil.

Reality: Waste disposal, mining, and the transport of materials from unconventional oil extraction can affect communities without oil.

Following a hydraulic fracturing (also referred to as fracking) operation at an oil well in Collier County in 2013, 35 truck trips transporting 203,100 gallons of fracking wastewater were made across the state to Miami-Dade County for disposal.¹ Public records indicate that the wastewater was not properly treated or disposed of, putting Miami-Dade's residents and natural resources at risk despite no drilling occurring in that area.

In addition, hydraulic fracturing operations require large quantities of sand to hold open rock in fractured wells.² This has fueled the sand mining industry, even in locations without significant oil and natural gas production.³

Myth: Fracking has been done in Florida for decades.

Reality: Only confirmed case of high volume hydraulic fracturing with proppant occurred in 2013.

On April 18, 2014, the Florida Department of Environmental Protection (DEP) issued a press release stating that DEP raised concerns regarding an enhanced extraction operation proposed at the Collier-Hogan well in Collier County, Florida. DEP stated that this technique "had not previously been used in Florida." The operation was later identified by technical experts in a DEP report to be hydraulic fracturing.⁴

¹ Raider Environmental Services Environmental Manifest April 2014-July 2014.

² Kuhar, M. (2014). Frack sand market ready to explode. Rock Products 4

³ Younger, S. (2005). Sand Rush: fracking boom spurs rush on Wisconsin silica. National Geographic.

⁴ ALL Consulting. (2014). Expert evaluation of the D.A. Hughes Collier-Hogan 20-3H.

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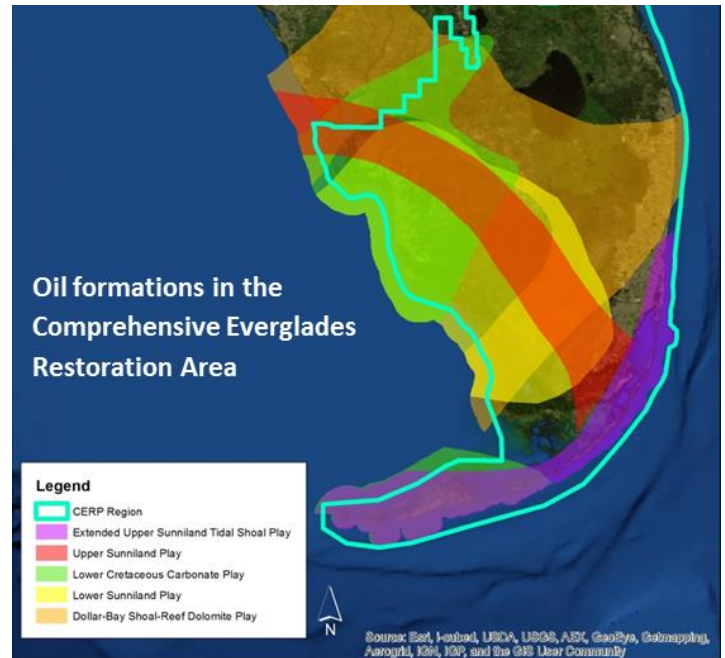
Myth: Drilling is not an “Everglades Issue”.

Reality: Oil drilling and exploration activities and proposals are happening right now in and around the Everglades. These projects threaten to divert, consume and contaminate clean freshwater essential to Everglades restoration.

The Hogan well was permitted to use more than 280 million gallons of freshwater from prime potable water supplies, a volume equivalent to more than 4,000 residential users. The Sunniland oil formation that the Hogan well was targeting sits under the Florida Everglades (yellow shaded area in map).

In addition to this enormous water use, drilling has and is proposed to continue to occur in the Everglades. There is an approved oil exploration project on 70,000 acres within Big Cypress National Preserve, as well as a proposed oil

exploration project on 103,000 acres just north of the Preserve.⁵ There is even an oil well that is proposed in water conservation area 3.⁶ The state has denied this well application, however the applicant filed an appeal to the state’s decision.⁷



Everglades Restoration Goals	Unconventional Oil Extraction
Increase freshwater storage and availability	Requires hundreds of thousands of gallons of freshwater
Decrease pollution	Spills and leaks may contribute to pollutant loading
Restore flow-ways	Construction of impervious well pads will impede natural flows
Restore and preserve wildlife habitat	Light, noise, and traffic will disturb wildlife

⁵ Burnett seismic survey proposal (70,454 acres) in Big Cypress National Preserve and Tocala seismic survey proposal in Collier and Hendry counties (103,000 acres) are both pending federal approval.

⁶ Kanter well 23-1, permit number 1366, proposed in Broward County pending state approval

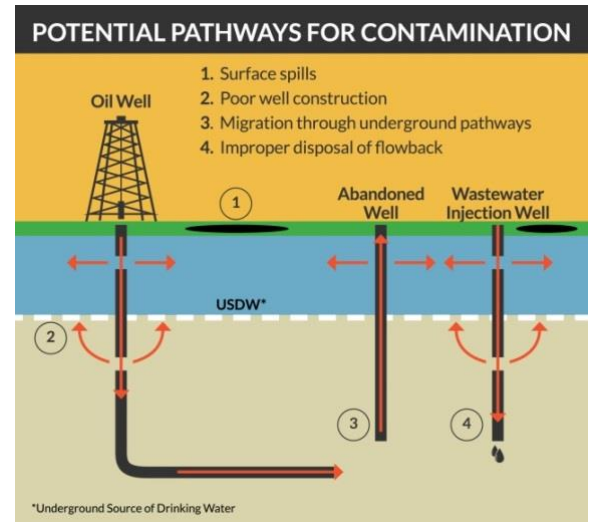
⁷ Sun-Sentinel, Miami Family Fights For Right To Drill For Oil In Broward Everglades. 2016. Web. 21 Dec. 2016. <http://www.sun-sentinel.com/local/broward/fl-everglades-oil-drilling-challenge-20161212-story.html>

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Myth: Unconventional oil extraction is deeper and therefore not as dangerous.

Reality: In Florida, unconventional oil extraction poses similar, if not greater, risk given Florida's unique hydrology and geology, and other specialized factors.

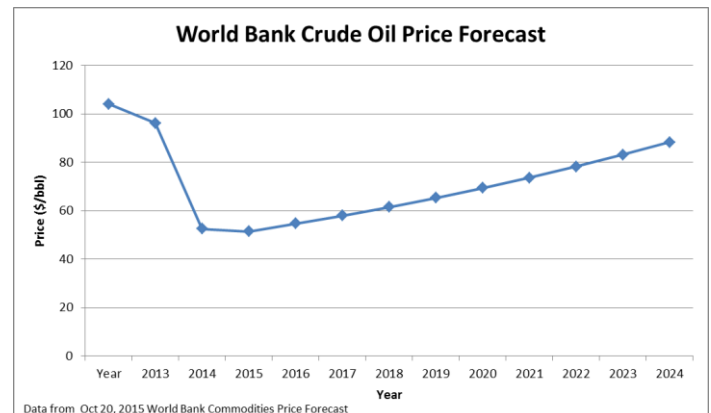
Florida's geology is naturally porous and permeable, making our aquifers highly vulnerable to underground contamination.⁸ Contamination can come from surface spills of chemicals or wastewater, as well as from fluids moving through improperly plugged oil wells that are no longer in use. Furthermore, natural underground openings can make it more difficult to properly construct wells. For example, public records document numerous problems during the construction of the Collier-Hogan well⁹ and subsequent groundwater monitoring well.¹⁰



Myth: Unconventional extraction is no longer an issue given low oil prices.

Reality: The oil industry is continuing to pursue 173,000 acres of new oil exploration in South Florida, and other factors can make drilling sufficiently profitable despite lower prices.

Oil prices are predicted to rise over the next several years.¹¹ And with new information from seismic surveys, new or expanded oil drilling on sensitive lands or with risky techniques is a threat.



⁸ Environmental Protection Agency. (1991). Regional assessment of aquifer vulnerability and sensitivity in the conterminous United States.

⁹ ALL Consulting. (2014). Expert evaluation of the D.A. Hughes Collier-Hogan 20-3H.

¹⁰ ALL Consulting (2015). Installation and sampling of deep monitoring well- DA Hughes Collier-Hogan 20-3H oil well investigation.

¹¹ World Bank. (20 Oct. 2015). World Bank Commodities Price Forecast. Retrieved from

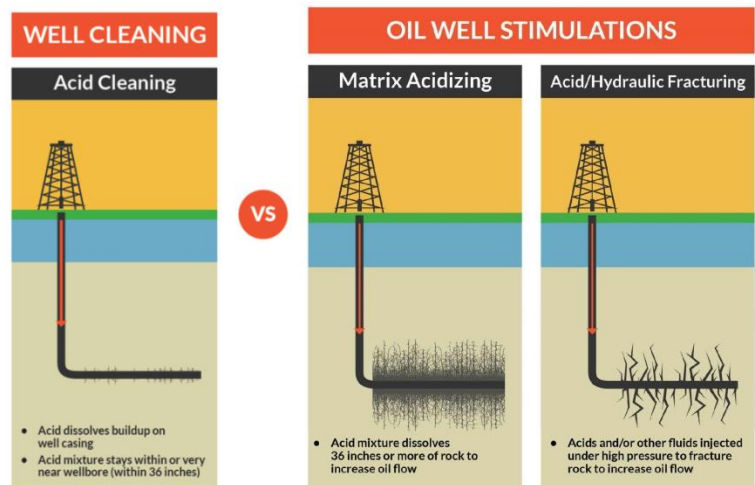
<http://pubdocs.worldbank.org/pubdocs/publicdoc/2015/10/966751445286237369/CMO-Oct-2015-Historical-Forecasts.pdf>

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Myth: Matrix acidizing techniques are identical to routine well cleaning.

Reality: Matrix acidizing is used to increase oil production; it is a different process with greater health and environmental risk than acid cleaning of oil and water wells.

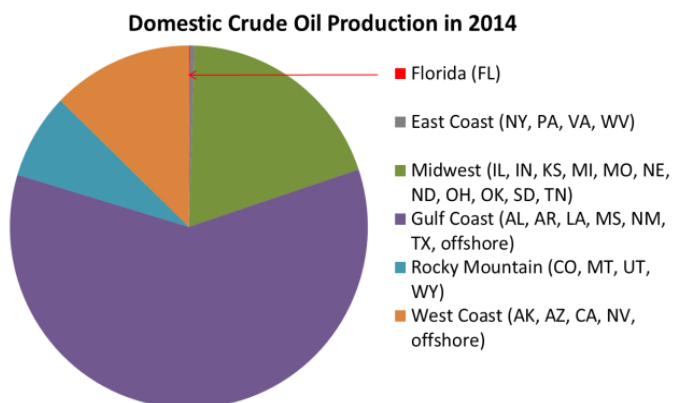
During matrix acidizing, fluids are injected into an oil well in order to dissolve oil bearing rock formations and increase the flow of oil from the formation into the wellbore. Much like hydraulic fracturing, matrix acidizing uses toxic chemicals, wastes potable water resources, and produces wastewater byproducts. During routine cleaning operations, much smaller volumes of fluid are injected in order to remove scale and debris from the wellbore. The state of California has adopted language and a scientific formula to easily distinguish between matrix acidizing—which may dissolve the rock around the well by several feet— from a routine cleaning.¹²



Myth: Florida oil is important to energy independence.

Reality: Florida contributes less than 0.1% to US domestic oil production.

The United States Department of Energy Information Administration indicated that total oil production in Florida accounts for less than 1/10 of 1 percent of total United States reserves.¹³ Florida is ranked only 25th out of 32 states in energy production.¹⁴



Data from U.S. Energy Information Administration

¹² $\frac{(((\text{Size of the drill bit diameter that was used in the treated zone}/2)(\text{inches}) + 36(\text{inches}))^2 - (\text{bit diameter}/2)^2) \times 3.1416 \times 12(\text{inches}) \times \text{treated formation porosity}}{231(\text{inches}^3/\text{gallon})}$. From California 14 CA ADC 1761

¹³ Glab, Edward. Energy Pro: Florida Is Not A Big Oil State. So Why Drill?. 2015. WLRN. <http://wlrn.org/post/energy-pro-florida-not-big-oil-state-so-why-drill>

¹⁴ Independent Petroleum Association of America,. The Oil & Gas Producing Industry In Your State. Washington DC: N.p., 2014. Web. 21 Dec. 2016. <http://www.ipaa.org/wp-content/uploads/downloads/2015/02/2013-2014OPI.pdf>