

# Addressing Extreme Oil Extraction in the Village of Estero



Aoghs.org



Tampa Bay Times



State Archives of Florida, Florida Memory,  
<http://floridamemory.com/items/show/117250>



Naples daily news



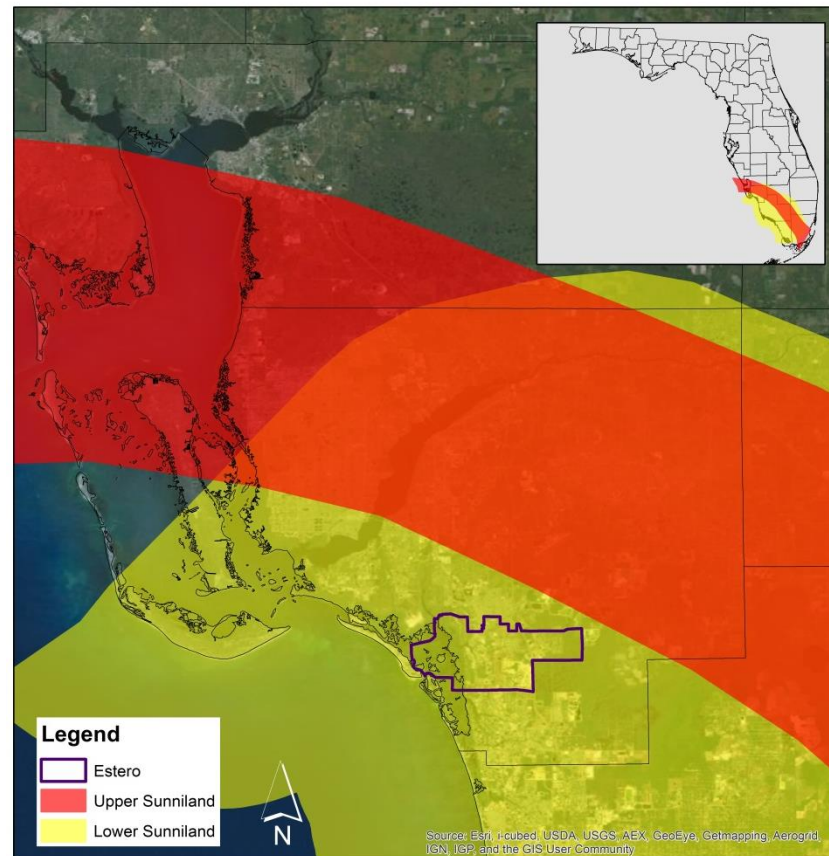
Dos.myflorida.com



# Oil in Estero

- Estero overlays the Lower Sunniland (shown in yellow)
  - Dan A Hughes Company L.P.’s “Hogan Well” which was acidized and fracked targeted the Lower Sunniland
- Sunniland is described by industry as
  - “an overlooked oil resource play”
  - “an emerging South Florida basin liquids play”

*Temple (2012). Sunniland Shale—an emerging South Florida Basin Liquids Play. Oil and Gas Journal.*



Hydrocarbon Plays: United States Geological Survey  
1995 National Oil and Gas Assessment  
Confirmed and Hypothetical Plays

Estero is within the Lower Sunniland (confirmed),  
Lower Cretaceous (hypothetical),  
and Wood River Dolomite (hypothetical)

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# Mineral Right Ownership

- Separate from surface rights, often held by different owner
- No centralized mineral rights database
- Requires title search for each parcel, cost prohibitive and logistically infeasible
- Can be sold/leased so driller may not be mineral right owner

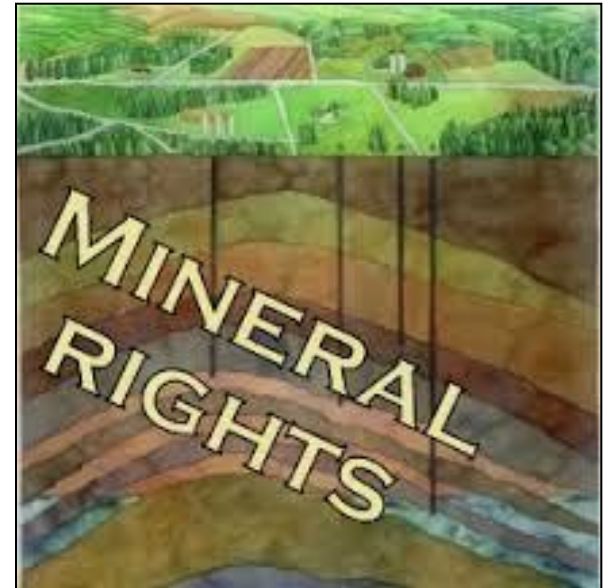


Photo from frackwire.com

Top News | Wed Oct 9, 2013 6:14am EDT

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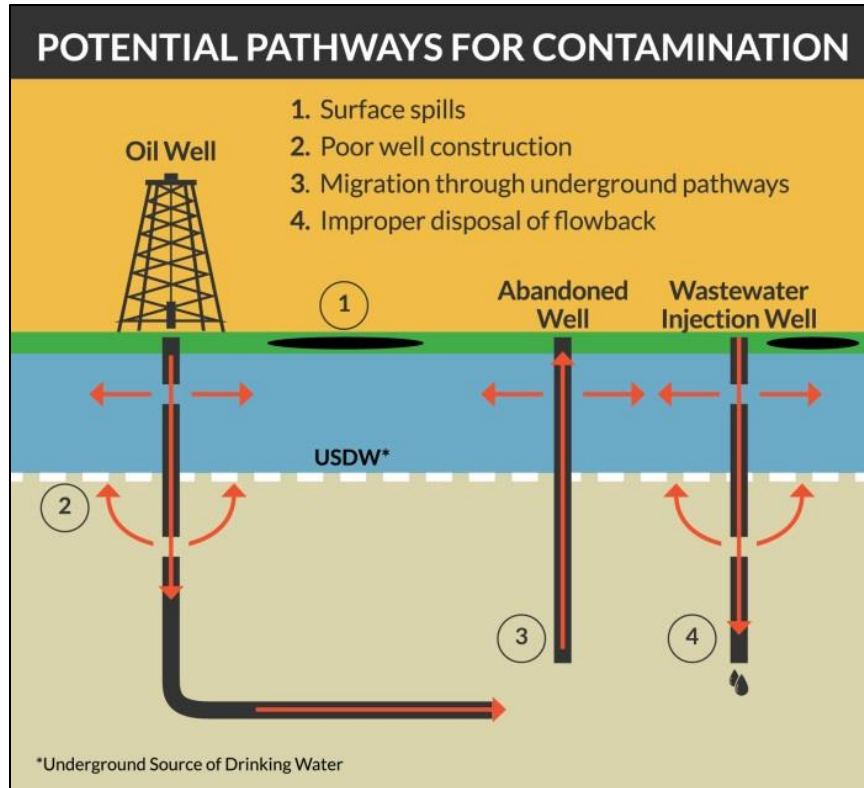
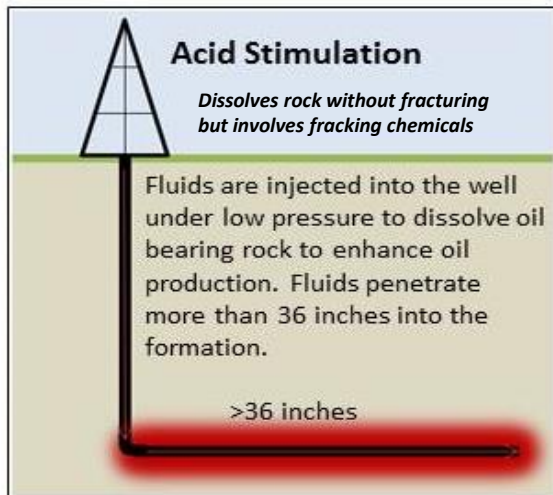
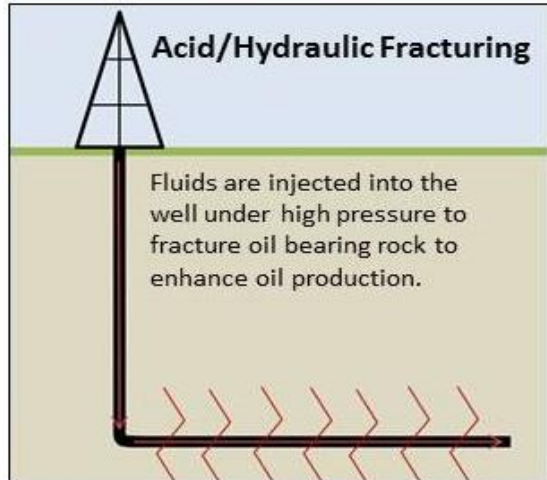
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NAPLES, FLORIDA | BY MICHELLE CONLIN AND BRIAN GROW



# Extraction Techniques

## Well Stimulation



- Oil drilling is a speculative use
- Not every well produces or is economically viable



# Fracking isn't always fracking in Florida

## “Acidizing Basics

Acidizing involves pumping acid into a wellbore or geologic formation that is capable of producing oil and/or gas. The purpose of any acidizing is to improve a well's productivity or injectivity. There are three general categories of acid treatments: acid washing; matrix acidizing; fracture acidizing.

In acid washing, the objective is simply tubular and wellbore cleaning. Treatment of the formation is not intended. Acid washing is most commonly performed with hydrochloric acid (HCl) mixtures to clean out scale (such as calcium carbonate), rust, and other debris restricting flow in the well.

**Matrix and fracture acidizing are both *formation treatments*. In matrix acidizing, the acid treatment is injected *below the formation fracturing pressure*.**

**In fracture acidizing, acid is pumped above the formation fracturing pressure.**

**The purpose of matrix or fracture acidizing is to restore or improve an oil or gas well's *productivity by dissolving material in the productive formation that is restricting flow, or to dissolve formation rock itself to enhance existing, or to create new flow paths to the wellbore.*** (emphasis added)

-American Petroleum Institute, at <http://www.api.org/~media/files/oil-and-natural-gas/hydraulic-fracturing/acidizing-oil-natural-gas-briefing-paper-v2.pdf> website

Because Acid Washing and Matrix Acidizing both occur at below the fracture gradient, some people conflate the two but Washing targets the well and Matrix Acidizing targets the rock formation.

However, since Matrix Acidizing often uses standard fracking chemicals and poses similar risks and impacts, it should be handled similarly to acid and hydraulic fracturing.

To address this, California developed a formula to differentiate Acid Washing from Matrix Acidizing.



# Surface Impacts of Concern



Photo from: Miami Herald

Impervious Surfaces

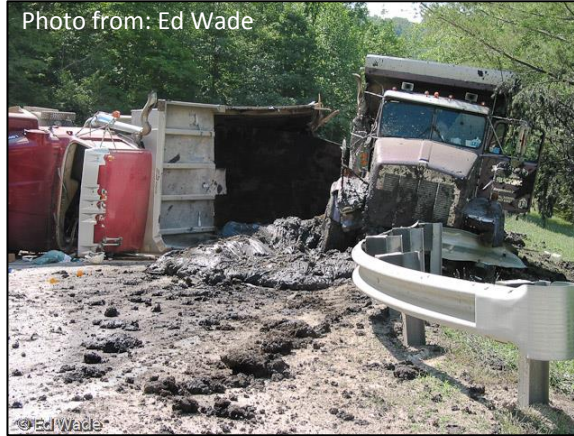


Photo from: Ed Wade

Vehicle traffic on local roads

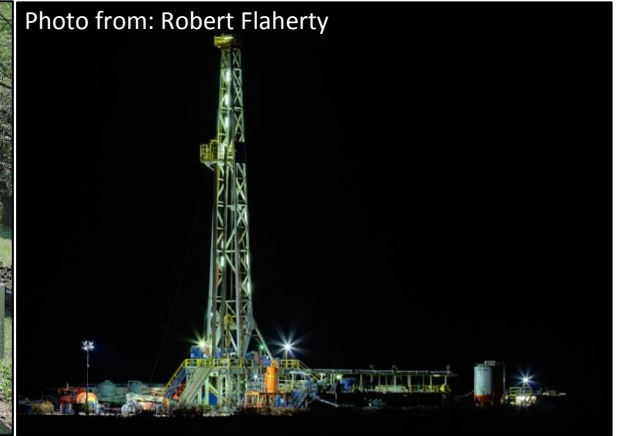


Photo from: Robert Flaherty

Light Pollution



Photo from: marcelluseffect.blogspot.com

Air Pollution

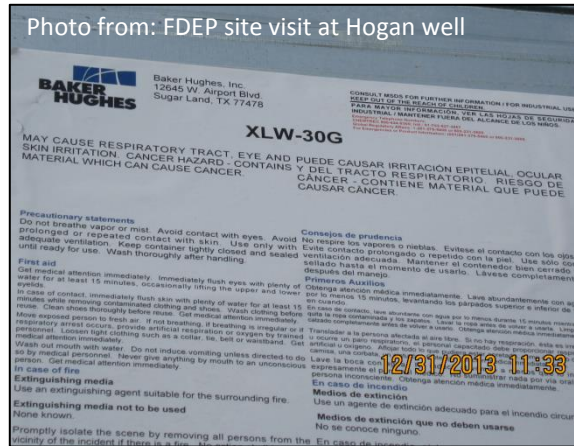


Photo from: FDEP site visit at Hogan well

Chemicals Transport /Storage



Photo from: Ohio Citizen Action

Waste Transport/ Disposal



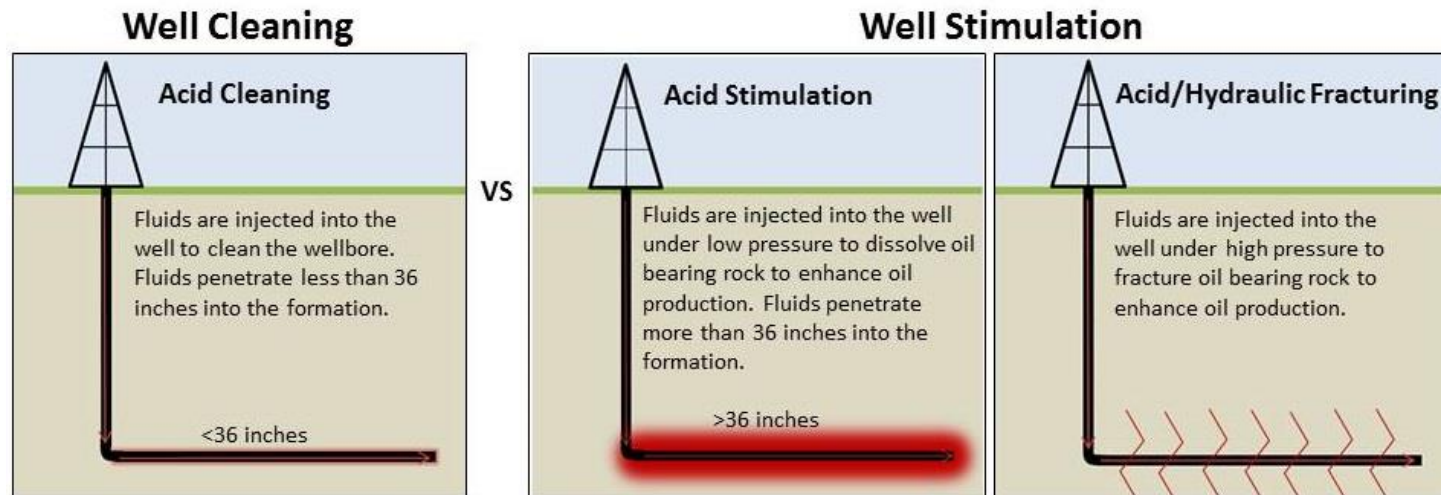
# Estero Authority : Surface Impacts

- Exercise municipal home rule power outlined in Florida Constitution, Ch. 166, F.S.; (see also, Section 377.24 F.S.)
- Address well stimulation by zoning districts to prevent incompatible surface land use
  - Drillers could still use horizontal (without stimulation) or conventional drilling



# Well Stimulation Ordinance Language

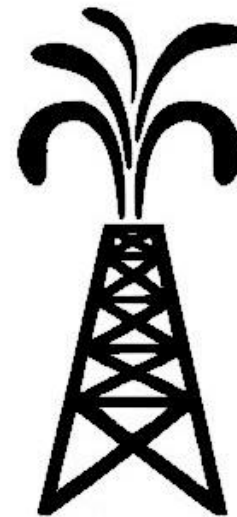
“Well Stimulation” shall mean a well intervention, exploration, operation, or maintenance procedure performed by **injecting fluid, including chemicals, into a rock formation in order to increase flow of production at an oil or gas well** by increasing the flow of hydrocarbons from the formation into the wellbore. Well stimulation does **not** include routine well cleaning that does not affect the integrity of the well or the formation.





# Water Wells Are Not Captured

By using language which specifies well stimulation is injection of fluids into an **oil or gas well** to improve flow of hydrocarbons, ensures water well cleaning is not captured.



# No Permit for Well Stimulation

## Current State Process

1. Own or lease minerals
2. Apply for FDEP drilling permit (Valid 1 year)
3. Apply for FDEP operating permit (Requires recertification/ 5 years)
4. Notify FDEP of any workovers

**No permit required for chemical treatments**

### FAC 62C-25.002

(61) **WORKOVER** shall mean an operation involving a deepening, plug back, repair, cement squeeze, perforation, **hydraulic fracturing, acidizing, or other chemical treatment which is performed in a production, disposal, or injection well in order to restore, sustain, or increase production**, disposal, or injection rates.

### FAC 62C-29.006

(1) Notification. Each operator shall notify the Department's agent prior to commencing a workover operation or, during an emergency, as soon thereafter as possible.



# Municipal Authority to Review Drilling Permits

- Section 377.24 F.S. **currently** prohibits
  - Drilling of a gas or oil well within the corporate limits of a municipality ***unless the governing authority has approved the application by resolution***
- BUT Workover well stimulation notice is only given *after* the drilling permit has already been issued *and* workover has already occurred.
- Well stimulation ordinance would protect the City and its residents – addressing zoning issues that the state won't
- Ordinance would prohibit well stimulations



# Other Local Government Actions

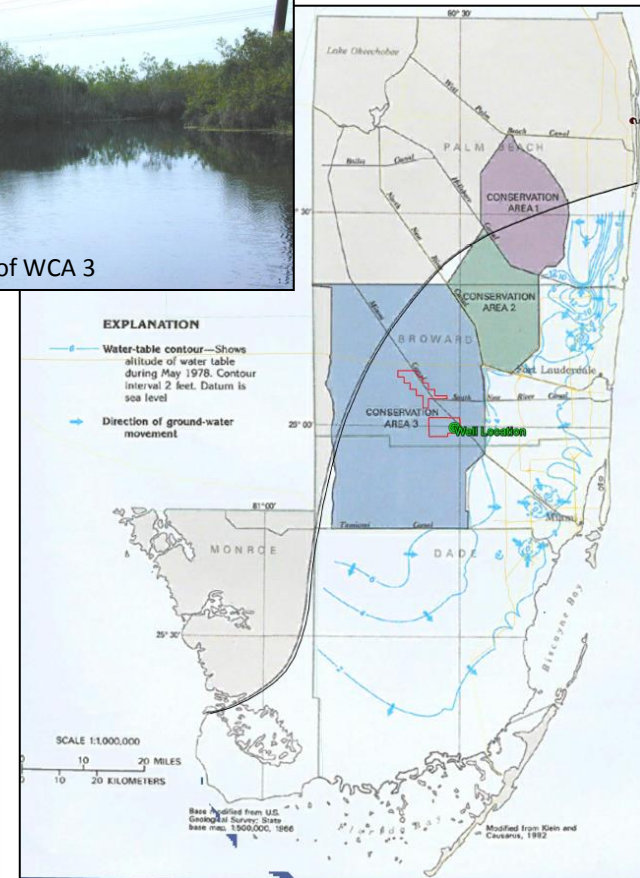
- City of Bonita Springs
  - Amends land development code to prohibit “well stimulation”
- City of Coconut Creek
  - Amends land development code to prohibit “well stimulation”
- St. Lucie County
  - Proposal to prohibit “high-intensity petroleum operations” including well stimulation



# Local Government Action in Florida

## Use of Local Zoning

- August 11, 2015 Broward County no drilling permitted in water supply conservation areas
- Drilling is not compatible with primary functions of a designated Water Conservation Area for wildlife protection and water management



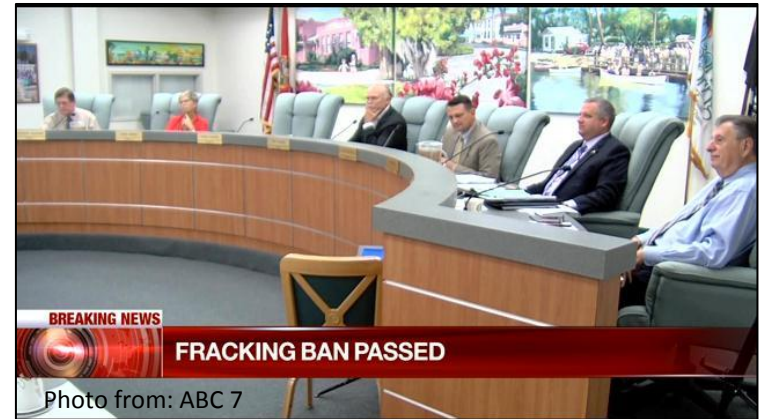
Map of Kanter oil well location in Water Conservation Area 3

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Miami Herald  
FULL MENU NEWS SPORTS BUSINESS REAL ESTATE  
ENVIRONMENT AUGUST 11, 2015  
Broward County: local zoning trumps oil drilling rights



# Proposed Preemption in State Legislation

- HB 191 and SB 318 preempt *all* local home rule authority over *any* oil or gas project
  - Critical to remove preemption and protect home rule
- Delete municipal authority under Section 377.24 F.S. to review drilling
  - Critical to keep 377.24 F.S. municipal authority to approve (or deny) oil/gas wells based on zoning issues

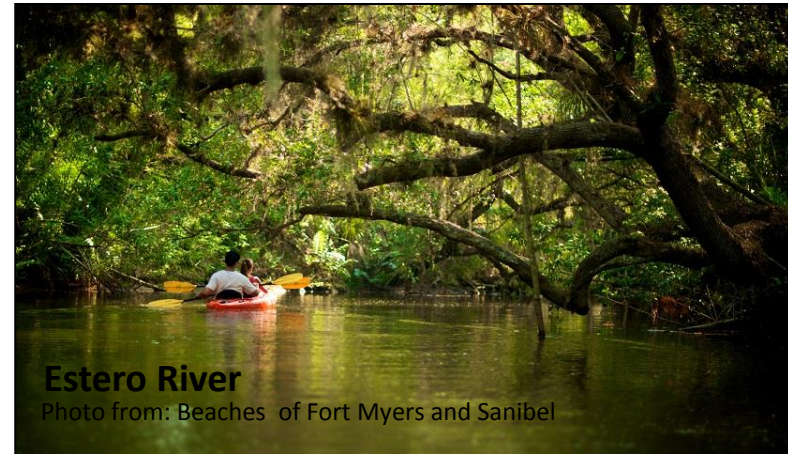


**Protecting Local Oil Extraction Ordinances**



# Recommendations

- Adopt a Well Stimulation Ordinance
  - Village currently has authority to adopt such an ordinance
  - Potential grandfathering if scope of preemption is lessened
- Ordinance is critical to:
  - Protect citizens – public health and the private property rights of others
  - Protect public assets
  - Preserve community character





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