



Infrared images show the methane gas cloud from the Aliso Canyon Gas Storage Field in LA County. Photo credit: [EDF](#)

Never doubt that a small group of thoughtful, concerned citizens can change the world. Indeed it is the only thing that ever has." - Margaret Mead, cultural anthropologist

Greetings!

Out with the old and in with the new... have we got another jam-packed issue for you! First off, RDA Board member Barb Jarmoska tells the story of ten recent well violations in Lycoming County, as Inflection Energy failed to properly seal well bores. RDA member and aquatic biologist Harvey Katz also lends his insights.

On the national and global scene, Josh Fox discusses natural gas and climate change while stressing the true power of communities to make a difference.

As we transition into the year ahead, we must remember not to repeat the mistakes of the past and to keep progressing toward a better future for generations yet to come. 2015 saw many great achievements on the environmental front, such as stopping the Keystone XL Pipeline. However, the pipeline fight is only just beginning, as Dory Hippauf writes in [Frackorporation's Forward to 2016](#). "With the glut of oil and natural gas, fossil fuel corporations are having a difficult time making profits. Drillers are desperate to find places to store and sell their product and this has created a pipeline construction and export terminal boom. This boom has and will create more grassroots and community groups to oppose it."

Speaking of pipelines, as 2015 came to an end, so did the comment period for PA's Pipeline Infrastructure Task Force (PITF) Draft Report. According to the Department of Environmental Protection (DEP), the PITF is a stakeholder-driven effort to develop policies, guidelines and tools to assist in pipeline development (planning, permitting and construction) as well as long-term operation and maintenance. It's supposed to be a transparent process, entailing close coordination with federal agencies, state partners, local governments, industry representatives, landowners and environmental advocates. However, with the release of the Draft Report came an announcement of the comment period, but included no scheduled public meetings or hearings. As the report itself states, "All told, this pipeline infrastructure build-out will impact communities and the environment in every county in Pennsylvania," so it seems like something worth meeting about. RDA formulated and submitted a detailed comment to PA's DEP. Big thanks to Ralph Kisberg for his effort. A snippet from RDA's comment (Priority Recommendation

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In Other News

Massive Methane Gas Leak Displaces Thousands in Los Angeles County

A major methane leak from a Los Angeles County natural gas storage field is spewing huge amounts of the potent climate change chemical into the air. Nearly 2,000 elementary students whose schools are nearby will have to enter different schools by mid-year. Low flying aircraft have been instructed to steer clear, and about 3,000 families have sought relocation. Several lawsuits have been filed on behalf of residents who say they've been harmed. Neither efforts to capture the leaking gas nor to seal off the damaged well have been successful.

#1) follows:

With its legacy coal industry, its agricultural and manufacturing base, and now the advent of economically viable shale gas and liquids resource exploitation, Pennsylvania's contribution to worldwide greenhouse gas emissions far exceeds that of most of the world's political entities of comparable area or population. In order to be responsible members of the world community in the 21st Century, at the very least we must endeavor to minimize atmospheric methane emissions from all shale gas operations. RDA therefore supports the following cluster of Environmental Protection Work Group Recommendations as first in our top priority list.

These recommendations also serve a dual purpose -- when fully implemented by all operators, they will lead to increased safety and health benefits: Use dry seals for centrifugal compressors, Minimize methane emissions during compressor state shutdown periods, Use pump-down techniques before maintenance and repair, Implement directed inspection and maintenance program for compressor stations, Minimize methane emissions, Properly use and maintain pipeline components, Implement leak detection and repair for all above-ground components of pipeline infrastructure.

RDA commends the Work Group for their efforts on these recommendations. All of them make long term economic sense for the Commonwealth and in most cases for the operators as well. Unfortunately, the oil and gas industry is often short sighted, squawking reflexively at any extra up-front expenses, especially at a time of low prices for their commodities. We urge the task force to see all these recommendations through in whatever manner makes them mandatory requirements as soon as possible. [This is just a small part of the comment. Click here to view RDA's entire letter to DEP.](#)

The banner photo and the first "In Other News" story highlight an extreme case of the aforementioned issue with using natural gas to combat climate change... methane leakage. According to Tim O'Connor, California director for the Environmental Defense Fund's (EDF) oil and gas program, "In terms of aggregate greenhouse gas emissions, [the Los Angeles County methane leak] is far greater than the BP Deepwater Horizon disaster."

In addition to the recent and worrisome Inflection Energy violations, the sidebar offers you Food & Water Watch's worst fracking incident list for 2015 and the latest on the JKLM Energy violation in Potter County.

Looking for a fun way to get involved & learn more about RDA? Come join some of our members on Saturday, January 9th at 11 am as we hike to Angel Falls in Sullivan County (see more details below). Or perhaps you'd like to join our next Working Group meeting, which will be held on Monday, January 11th, 5:30 pm at the Mill Tavern, Broad Street, Montoursville. Everyone is invited and encouraged to attend. We welcome your active participation. RDA promises to put your time, talents and passion to good use as we continue our mission of education, advocacy and protection in 2016. Please come join us & see what the RDA Working Group is all about. Attendance at a meeting is not an obligation to join the group.

Get involved and help 2016 see even greater strides for our environment.

Thank you for caring and staying informed. Pass this around.

Sincerely,

Brooke Woodside
RDA Member, Managing Editor

[Click here to visit our Facebook page.](#)



Aerial Footage from the Environmental Defense Fund

[Click here to listen/read more from NPR.](#)

All Naughty, No Nice: 5 Worst Fracking Moments of 2015

Once again, in 2015 the oil and gas industry showed us the ludicrous lengths they will go to in order to frack more communities.

Here are a few of the worst head-shaking stunts that made the news in 2015:

5. If the ice is melting, can we drill there?
4. The PA Department of Health doesn't want to hear it
3. If you pretend to help us, we have a deal
2. Shaking things up in Oklahoma
1. Give us a few more months and we'll be sure to fix this little leak for you

[Click here to read more from Food and Water Watch.](#)

DEP Contamination Investigation Updated and Ongoing

PA DEP and JKLM Energy, LLC updated the public on their complex and costly investigation in Sweden Township, Potter County, during the Natural Gas Resource Center meeting held on December 17th. The investigation surrounds the Reese Hollow 1182HU gas well, aquifer, public and private water wells and also surface water.

[Click here to read more.](#)

Electrifying India, with the Sun and Small Loans

A generation of Indian energy entrepreneurs is out to prove

Inflection Energy's Incompetence

by Barb Jarmoska, RDA Board of Directors

Dr. Anthony Ingraffea, Dwight C. Baum Professor of Engineering, Weiss Presidential Teaching Fellow at Cornell University and president of [Physicians, Scientists and Engineers for Healthy Energy, Inc.](#), has been warning us for years: the greatest risk posed by unconventional gas drilling (the process commonly referred to by the generic term "fracking") is in the cementing of the well bore.

Ingraffea ought to know. He is a former industry insider turned implacable fracking opponent with a PhD in rock fracture mechanics. Ingraffea understands precisely what corporations do when they disrupt the 400 million-year-old shale creations of nature. He warns us that many wells fail early-on, and guarantees us that ALL wells will fail over time. [Click here to view details of the research to back up this claim, available on the federal government's EPA web site.](#)

[Click here to view Ingraffea's interview and video presentation.](#)

Sadly, the drilling industry's record on well failure is not improving. In 2010, 6% of all wells failed immediately. In 2011, that figure was 7%; in 2012, it jumped to 9%. This means that the well bore in 9 out of 100 wells could IMMEDIATELY leak gasses (methane) and/or chemicals into the aquifer that it passes through on its way to the shale formation. Over time, all wells will lose integrity.

Last week, here in Lycoming County, Ingraffea's warnings were very much in evidence as DEP cited Inflection Energy for TEN violations, each noting the company's failure to properly cement gas wells. Three of these violations occurred in Upper Fairfield Township, and seven in Eldred Township. The language used by DEP provides the following description for each violation:

Operator failed to drill to approximately 50 feet below the deepest fresh groundwater or at least 50 feet into consolidated rock, whichever is deeper, and immediately set and permanently cement a string of surface casing to that depth.

Specific details and locations about each violation can be accessed via the following links:

Upper Fairfield Township - [Violation ID 742029](#), [Violation ID 742031](#), [Violation ID 742033](#)

Eldred Township - [Violation ID 742036](#), [Violation ID 742038](#), [Violation ID 742042](#), [Violation ID 742044](#), [Violation ID 742048](#), [Violation ID 742050](#), [Violation ID 742052](#)

Harvey Katz, aquatic ecologist and RDA member, offers these insights into the disconcerting unknowns of well failures and fresh water aquifers. His warnings do not bode well for rural residents who drink from the aquifers now being routinely assaulted by gas company well bores. Katz writes:

Our knowledge about geology and aquifers is carried out mostly by DCNR's Bureau of Geology (BOG). This is a very small agency that has done very little work on understanding aquifers. Masterwell Owners Network (MWON), run by Bryan Swistock out of Penn State Extension, has made it very clear that almost nothing is known about the state's aquifers. The only law that addresses private home water wells deals with bacterial contamination.

I have no idea how the water flows into my home water well. I do know that during very wet periods my home well comes to 37 feet from the surface, and that during a drought the water level can drop to at least 125 feet from the surface. Think of an aquifer as an underground lake that

that a fast, clean and economical route to universal electrification is through solar home systems, financed with small bank loans.

[Click here to read more from The New York Times](#)

America's Top Shale Gas Basin In Decline

The natural gas drilling frenzy is grinding to a halt, as the industry struggles with excess supply.

Natural gas prices have plunged to their lowest levels in more than a decade this month, dipping below \$1.80 per million Btu (MMBtu).

The shale gas revolution is an old story at this point, one that everyone is familiar with. But the revolution never really ended, even though the media moved on to focus on the tight oil boom. Natural gas production continued to rise over the past decade, reaching record heights in 2015.

[Click here to read more from Oilprice.com](#)

Well Count - Lycoming County

The following permits were issued within the listed Lycoming County municipalities. Click on the blue titles below each gas company's name to learn more about each new well.

Franklin Township
[EXCO Resources PA, LLC](#)
[BUDMAN 4H](#)

McHenry Township
[PA Gen Energy Co, LLC](#)
[SGL 75 PA A 2731](#)

Hepburn Township
[Seneca Resources, Corp.](#)
[WALTERSGAMBLE 40H51712](#)
[WALTERSGAMBLE 43H51715](#)
[WALTERSGAMBLE 44H51716](#)

Events/ Action Points

Our State Forests v. Fracking

goes up and down depending on how much precipitation we get. It also goes up and down depending on how many homes are removing water from that underground lake. But, I don't, nor does anyone else, know the source of that water or where it flows. My best guess is that rain/snow landing on the higher elevations infiltrates the ground and is the primary source of the aquifer. I am also guessing that this water, if not drawn off for homeowner use, eventually flows downhill (underground) and discharges via springs and seeps into the Loyalsock Creek. But, this is only an educated guess.

In a perfect world DCNR would staff the Geology section with the trained people necessary to get that aquifer data. That means our local politicians would have to vote for that money to be made available. Not likely, with those currently in office. So, that keeps people like you and me in the dark. It also means that when the natural gas industry contaminates my aquifer no one will know about it until someone gets sick and reports it to DEP. That assumes that the sick person and their doctor can figure out the source of the contamination. My cynical view is that we cannot afford to keep electing people who are in denial of these cause-and-effect relationships, or that perhaps do not care.

These violations seem to mock Inflection Energy's claims:

The Inflection Energy team is committed to protecting the environment and in minimizing surface disturbance when conducting natural gas activities on royalty owners' lands. Inflection Energy meets or exceeds best-in-class standards when drilling and completing its wells, and highly values the company's relationships with landowners and communities, who are its partners in the efficient and orderly development of their natural resources.

However, Inflection's ten violations ring true when viewed against the backdrop of George Mitchell's claims. Mitchell has been called the father of the modern fracking technique, and had this to say in a 2012 interview with Forbes Magazine:

The administration is trying to tighten up controls. I think it's a good idea. They should have very strict controls... Because if they don't do it right there could be trouble... There's no excuse not to get it right. But, the smaller, independent drillers are wild. It's tough to control these independents.

In the interview, Mitchell dismisses any concern that the costs to drillers to abide by a barrage of fracking regulations would be egregious. After all, any extra costs associated with best practices are always passed on in the price of natural gas.

[Click here to see the full text of the interview.](#)

In light of Ingraffea's warnings and Inflection's recent violations, what is a rural, a quifer-drinking resident to do? I ask myself that question every time I turn on the tap at my home.

Fracked Gas Won't Achieve Paris Climate Goals, But Empowering Communities Could

The following was posted on Triplepundit.com on December 28, 2015.

by Josh Fox

The United States is undergoing a massive energy transition that isn't receiving enough attention, and it could render the [Paris climate agreement](#) meaningless. We're swapping one climate-damaging fuel, coal, for

Please act TODAY to continue protecting Pennsylvania State Forests from fracking.

The Pennsylvania Department of Conservation and Natural Resources (DCNR) is drafting a plan that will change the way it manages our 2.2 million acre state forest system including shale gas and water resources, and they want your input.

So whose plan will it be? Will it be a plan for the people of Pennsylvania who enjoy the great outdoors? Or will it be a plan designed for the exploitation of thousands of acres of forest land for industrial energy development?

Take action now and let DCNR know they need to create a plan that protects our state forests from existing and future natural gas drilling operations. The comment period closes January 31st.

[Click here to sign a petition prepared by Clean Water Action.](#)

If you would like to submit a personal comment to DCNR, you can do that too!

Email comments to: StateForestPlan2015@pa.gov

or mail to:
Bureau of Forestry
Planning Section
PO Box 8552
Harrisburg PA 17701-8552.

[Click here to learn more about the plan or to submit an online comment to DCNR.](#)

Tell the Department of Justice to Prosecute Exxon

Exxon knew about climate change, and instead of acting, they spent decades lying to the American public and delaying action.

It's time to prosecute ExxonMobil for its 20-year campaign to knowingly defraud the American public about the danger posed by fossil fuels and climate change.

[Click here to sign this petition from Environmental Action.](#)

Request a Government Office Review of FERC

another that is actually worse: [fracked gas](#).

It's a stark contradiction for U.S. climate policy. The Obama administration used its executive power to push the agreement and its aspirational goal of keeping warming to "well below" 2 degrees Celsius. The agreement is a good thing. But for the U.S., a big part of reaching its [intended nationally determined contribution \(INDC\)](#) commitment is implementing the [Clean Power Plan](#), the EPA's framework for states to reduce their carbon emissions. It's designed to facilitate a wholesale transition from coal to natural gas, much of which is a product of fracking.

Phasing out coal is also a good thing, but replacing it with gas will send emissions soaring, and put that "below 2 degree" goal out of reach - that is, unless communities succeed in standing up to the fossil fuel industry and replacing coal with renewables, not gas. By themselves, current INDCs connected to the Paris agreement will lead to a 3.5-degree warmer future. Any hope of grounding Paris's lofty goals in reality depends on the grassroots acting fast to stop the [gas industry juggernaut](#).

Gas power plants emit less CO2 than coal, so they sneak under the Clean Power Plan CO2 limits, and it's easy and cheap to swap gas burners for coal burners in existing power plants. But natural gas is mostly methane, which is about a hundred times more powerful than CO2 as a warming agent. Gas drilling, fracking, and transport via pipelines and compressors means massive amounts of it will leak directly into the atmosphere before it's even burned, swamping any potential gains in CO2 emissions for the global climate, while also causing local environmental and health damage.

The industry is currently proposing, and the Obama administration is busy approving, hundreds of power plants, hundreds of thousands of miles of pipelines, compressor stations, LNG terminals and other fracked gas infrastructure across America. It's like [Keystone XL](#) times 100 (in Roman numerals that would be Keystone CD, for "carbon dump"). They're ramming through the Constitution pipeline in upstate New York, the CPV power plant in Middletown, New York, the NED pipeline through New England, two massive gas fired power plants in Denton, Texas, the Millennium pipeline expansion in Pennsylvania, the Tennessee pipeline in West Virginia, the gas storage facility at Seneca Lake, New York, and on and on.

Local communities are fighting these projects across the country, but they are largely unconnected to each other and lack the tools and resources they need to win. We urgently have to change that, because unless they do win, we will have 40 more years of fracked gas extraction and usage built into the energy system, and we can forget about keeping warming under 2 degrees.

I've made a new film, "How To Let Go of the World (and Love All the Things Climate Can't Change)" about the power of local communities to determine their own climate and energy solutions democratically, and reject the industry bid to lock in more fossil fuels for decades to come. Here's the trailer:



How to Let Go of the World (and love all the things climate can't change)

Filmmaker Josh Fox is artistic director of the International WOW Company. His 2010 film *GASLAND* galvanized the anti-fracking movement, and his new film on communities fighting climate change premieres at the Sundance Film Festival in January. For more information, visit www.howtoletgomovie.com.

Keep it Wild: Angel Falls

Mark your calendars and come be a part of our next hike to Angel Falls in Sullivan County on **Saturday, January 9th at 11 am**.

FERC is a blatantly biased agency that doesn't just favor the pipeline companies over the public, but actively works to help advance pipelines, including by stripping the public of our legal rights to challenge projects in the courts.

A Government Accountability Office review of FERC could help to shine the light of day on the abuses of FERC and help all of the communities and environments being devastated by the construction and operation of fracked gas pipelines and LNG export facilities.

Senators Bernie Sanders and Elizabeth Warren are on the committee that can request and get the GAO investigation we need. But both of them are very busy given their high profile work. So we need to make sure they hear from enough of us to understand the importance of granting our request - that means thousands of us need to ask. Please help us get there.

[Click here to sign this petition prepared by the Delaware River Keeper Network.](#)

Tell Congress: Keep Fossil Fuels in the Ground!

It's time to protect our people, our economy and our planet. It's time to take action to turn the tide on global climate change. It's time to end all new leases for coal mining, oil drilling, tar sands extraction and fracking on our public lands, stop all new leases for drilling off the Pacific, Atlantic and Gulf of Mexico coastlines and prohibit offshore drilling in the Arctic. Let's keep it in the ground!

We need to manage our coastlines and public lands for the benefit of the public, not big polluters.

[Click here to sign this petition prepared by Senator Jeff Merkley.](#)

Join RDA!

Our next Working Group meeting will be held on **Monday, January 11th, 5:30 pm** at the Mill Tavern, Broad Street, Montoursville. Everyone is invited and encouraged to attend. We welcome your active



Angel Falls - Photo credit: Onlyinyourstate.com - Nicholas A. Tonelli

Driving Directions: Go North on Rt 87 from Montoursville past Barbours to Ogdonia Road on the right. Take Ogdonia Road until it splits. Take the left hand road of the split. Parking for the trail is not far past the split on the left. The more the merrier. Bring a friend. We hope to see you there!

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participation and are in need of help for special events, publicity, research and other projects. Please come join us & see what the RDA Working Group is all about. Attendance at a meeting is not an obligation to join the group.

It costs nothing to sign up for our e-newsletter, but tax-free donations are accepted & greatly appreciated. Please consider a tax-deductible donation to RDA.

As a 501(c)(3) non-profit organization, RDA relies on donations for the important work we do. In order for RDA to continue its valuable education and advocacy outreach in 2016 and beyond, please consider a tax-free contribution to our efforts.

You can send a donation to the address listed at the bottom of this email, [click here to donate via PayPal](#) or [click here to download our current membership form](#) to fill out and send in along with your donation.

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Woodlander.....\$50
Guardian.....\$100
Naturalist.....\$500
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Please note: The RDA newsletter includes reporting on a variety of events and activities, which do not necessarily reflect the philosophy of the organization. RDA practices only non-violent action in voicing the organization's beliefs and concerns.

Responsible Drilling Alliance | responsibledrillingalliance@gmail.com

<http://www.rdapa.org>

Phone: 888.332.1244 (toll free)

Please mail donations to:
RDA, PO Box 502, Williamsport, PA 17703

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