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Ohio Valley Environmental Coalition

Supporting Organized Voices and Empowered Communities Since 1987

P.O. Box 6753 Huntington, WV 25773-6753

Ph. 304-522-0246 Fax 304-522-4079

info@ohvec.org

October 13, 2018

USDA Forest Service
Attn: Director- MGM Staff
1617 Cole Boulevard, Building 17,
Lakewood, CO 80401

Re: Advance notice of proposed rulemaking on Oil and Gas Resources, 36 CFR 228 Part E
Docket number: FS-2018-0053

To: Whom it may concern:

This letter serves as one initial comment by OVEC, the Ohio Valley Environmental Coalition, in response to the advance notice of proposed rulemaking (ANPR) issued by the United States Forest Service on September 13, 2018 (83 Fed. Reg. 46458), regarding revisions to 36 C.F.R. 228 Part E.

We have already joined with other civil society organizations in requesting a 60-day extension of the public comment period, along with public hearings. We respectfully repeat this request here. We believe our members and members of the American public have not had adequate time to review the extensive and troubling proposed rulemaking revisions in order to express their views on these proposals.

In the Federal Register notice, the U.S. Forest Service states: “The agency’s mission is to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations.” We do not believe that expediting the approval of permits for the development of oil and gas resources in sensitive national forests will “sustain the health, diversity, and productivity of the Nation’s forest.” We believe that these lands should be maintained for the public’s use and enjoyment of their surface features, and for the health of the local and regional ecosystems. Human health and well-being is directly tied to healthy ecosystems.

Given the special report, *Global Warming of 1.5°C*, just released by Intergovernmental Panel on Climate Change, it is untenable and ecocidal for the United States government to be expediting the approval of permits for the development of oil and gas resources in our national forests. Or anywhere. (<http://www.ipcc.ch/report/sr15/>)

Recent studies have shown that fracking operations release fugitive methane emissions at a much higher rate than the oil and gas industry reports. (<https://www.edf.org/energy/methodology-estimating-untracked-emissions>) Over a span of two decades, methane can be as much as 86 times more potent at trapping heat in the atmosphere than carbon dioxide.

While we’ve long known we must take action to reduce greenhouse gases, this report drives home the need for unprecedented action ASAP. We have about 12 years to take unprecedented action to save life

on earth. Protecting forests and afforestation—not deforestation—is one of the key steps we can take to stave off some of the direst consequences of climate change.

(https://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch9.html)

Just in case making every attempt we can to stave off catastrophic climate change isn't enough reason to ditch efforts to accelerate the permitting process for oil and gas development in the 44 national forests where drilling is currently authorized, here are a few more.

Humans use these forests. In addition these tracts of land are crucial to the well-being of many other species, such as the cerulean warbler, which are becoming or already are threatened and endangered.

Plant species located in these lands are also of critical importance. Our national forests, especially the Wayne in Ohio, the Monongahela and George Washington in West Virginia, the Allegheny in Pennsylvania, the Jefferson in Virginia and the Cherokee National Forest in Tennessee, are home to many medicinal plants such as goldenseal and ginseng. These species have cultural and historical value to people in the region. These plants are listed under Appendix II of the Convention on International Trade in Endangered Species (CITES). Medical studies are proving that their value as medicinal plants is more than anecdotal. (<https://www.hindawi.com/journals/bmri/2018/1843142/>) and (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3100400/>).

Oil and gas development, especially high pressure horizontal drilling (fracking), and the activities that support fracking, such as infrastructure development (pipelines, well pads), would harm and even destroy these plants and their seed banks. A study conducted in the Fernow Experimental Forest in West Virginia (<http://www.nrs.fs.fed.us/pubs/gtr/gtr-p-78papers/23adamsp78.pdf>) showed that the forest ecosystem was affected by forest clearing, erosion, road building, and vegetation death from direct exposure to fluid spills and there was an increase in the white-tailed deer population. The Fernow forest composition is mixed mesophytic and similar to that of the above listed national forests.

Fracking wastes have been found to contain water soluble radionuclides that are brought to the surface via produced water. These will further endanger the health of many species in the forest, and could also impact human health for anyone who recreates or works in those forests. Well water supplies could be impacted, as underground produced water often migrates to ground water aquifers.

The streams and watersheds within and adjacent to national forests would be impacted by potential widespread leasing. The process of high pressure hydraulic fracking requires 4-6 million gallons of water per well, and drilling companies often seek out that water from local sources, often drawing large quantities of water from streams that are located near their drilling operations. This withdrawal of water from local streams would also result in harm to aquatic organisms.

Peer-reviewed studies on the content of fracking fluids and sediment which could impact the stream ecosystem near a drill pad reveal:

Fracking fluids typically contain chemical additives, e.g. friction reducers, biocides and surfactants, some of which contain substances known to be toxic or carcinogenic. Up to 70-90% of the fracking fluid is not recovered in the Marcellus shale and its fate in the environment is largely unknown. Inadequate storage, treatment or disposal of wastewater can also result in nearby surface water contamination. Very little is known about the potential effects of the chemicals, metals, organics or other contaminants once they enter terrestrial or aquatic food webs. Land clearing and construction of wells, pipelines and roads can result in excessive sediment in surface water. The researchers found that the amount of sediment in seven major streams in the Fayetteville Shale strongly corresponded with the density of gas wells in their

drainage area. These preliminary data suggest the potential for detectable cumulative effects from shale gas development and could signal the need for regulation to protect surface water resources. Potential ecological impacts of increased sediment and/or contamination are reductions in feeding efficiencies and impaired growth and reproduction in aquatic creatures, resulting in changes in community structure and overall ecosystem functioning. However, little ecological data are currently available. The researchers call for further scientific investigation into the toxicity of contaminants mixtures on complex communities and ecosystems in order to improve scientific understanding of the risks. Research could also trace methane and fracking chemicals to help to identify their fate in the environment and inform environmental policy.

(Entrekin, S., Evans-White, M., Johnson, B. & Hagenbuch, E. (2011). Rapid expansion of natural gas development poses a threat to surface waters. *Frontiers in Ecology*. 9(9): 503-511.)

Trees and other vegetation could be affected by the release of fluids from drill pad sites. Studies show:

Fluids from the drill pit were land-applied at two locations on the Fernow in June 2008, with nearly immediate impacts on vegetation. After the first fluid application site, many trees, shrubs, and understory plants showed immediate responses to the fluid application, with leaves turning brown, wilting, and subsequent leaf and bud mortality. We also observed that taller trees, whose leaves were not contacted by the fluids, also began showing decline symptoms about 10 days after the ground vegetation; these symptoms included leaf browning, leaf curling, and premature leaf drop.

(Adams, 2008 Long-term leaf fall mass from three watersheds on the Fernow Experimental Forest, West Virginia. In: Jacobs, D.F.; Michler, C.H., eds. Proceedings, 16th central hardwood forest conference. 2008 April 8-9; West Lafayette, IN. U.S. Department of Agriculture, Forest Service, Northern Research Station. Gen. Tech. Rep. NRS-P-24. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station: 179-186).

Fracking well pads and infrastructure would require clearing areas (cutting trees and vegetation). This would require areas of anywhere from four to twenty-five acres. Not only would this fragment the forest, but it would cause other effects that to date are still not clearly understood or studied.

(<https://esajournals.onlinelibrary.wiley.com/doi/epdf/10.1890/130324>)

Another concerning factor would be the pipelines that would be necessary to transport the fracked products out of the forest. These could amount to hundreds of miles in length, up to 42 inches in diameter, resulting in thousands of acres of forests being fragmented; such pipelines require significant tree clearing.

Habitat loss due to forest fragmentation is already a grave concern in North America.

For example: An analysis by Mountain Valley Pipeline of the controversial project's impacts on intact forests in Virginia underestimated those effects by more than 300 percent, according to an assessment by the Virginia Department of Conservation and Recreation and other state agencies. The analysis also states "fragmentation of an irreplaceable forest core diminishes its significant, wide-ranging ecological benefits."

The safety of pipelines themselves is cause for grave concern. Many of the "gathering lines are not regulated by state or federal authorities, even though they may be as big and under as much pressure as transmission lines." According to GAO report in 2010, "accidents on gathering lines caused more than \$15 million in property damage."

Even the "regulated" pipelines are proving to be exceeding dangerous. In June 2018, a massive explosion occurred near Moundsville, WV in the six-month-old Leach Xpress Pipeline. The blast,

apparently caused by a landslide, leveled about ten acres of forested land. In September 2018, heavy rains triggered another landslide that caused another pipeline blast, this time in the one-week-old Revolution Pipeline, in Beaver County, PA. Several people barely escaped, dozens were evacuated, several farm animals were killed, one home, two garages, a barn and several cars were destroyed, and an interstate was shut down. This month, October 2018, an Enbridge pipeline exploded in British Columbia, forcing 100 people to evacuate from the nearby Lheidli T'enneh First Nation as a precaution.

The amount of equipment that would be brought onto drilling sites would introduce and encourage the spread of invasive species. The off-road diesel fumes associated with fracking operations and the on-road diesel trucks would create significant sources of air pollution and noise pollution.

Active drilling sites are extremely noisy. How would such noise in national forests impact species that breed in there? “Noise pollution generated by natural gas extraction causes some avian species to avoid breeding sites (Blickley et al. 2012), resulting in reduced bird abundance (Bayne et al. 2008). (Bayne EM, Habib L, and Boutin S. 2008. Impacts of chronic anthropogenic noise from energy-sector activity on abundance of songbirds in the boreal forest. *Conserv Biol* 22: 1186–93 and Blickley JL, Blackwood D, and Patricelli GL. 2012. Experimental evidence for the effects of chronic anthropogenic noise on abundance of greater sage grouse at leks. *Conserv Biol* 26: 461–71.) This could also impact the quality of experience for human visitors to the national forests, resulting in less use of these wonderful lands by our citizens, and less tourism dollars for adjacent communities.

If the operations were to be active during nighttime hours, they would be significant sources of light pollution, as well. In addition, fracking operations have been known to allow flaring of natural gas. This results in a constant flames being visible in the sky. They are obnoxious and blot out the stars in the night sky. Studies show this process affects plant diversity (*Journal of Agriculture and Ecology Research International, The Impact of Gas Flaring on Plant Diversity in Ibeno Local Government Area* (https://www.researchgate.net/publication/276456443_The_Impact_of_Gas_Flaring_on_Plant_Diversity_in_Ibeno_Local_Government_Area))

Fracking requires huge quantities of cement for well casings and gravel for well pad stabilization. This means that the traffic in the region will increase tremendously becoming a burden on roads and to local citizens living in the area.

Fracking can require the use of more than 400 chemicals many of which are known carcinogens and endocrine disruptors. These, too, would be trucked (more traffic) into the region and stored on site. There have been reported cases of explosions and fires due to these chemicals. Additionally, these could and do leak off of the well pads during fracking. (Kassotis CD, et al. Endocrine-disrupting chemicals and oil and natural gas operations: potential environmental contamination and recommendations to assess complex environmental mixtures. *Environ Health Perspect* 124(3):256–264 (2016), doi: [10.1289/ehp.1409535](https://doi.org/10.1289/ehp.1409535).)

OVEC will be joining with multiple other civil society organizations in submitting more technical comments, and we reiterate our request for a 60-day extension of the comment period, along with the scheduling of public hearings.

Sincerely,
Vivian Stockman,
OVEC Vice Director