

## Davidson, Florene, EMNRD

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**From:** Elaine Cimino [ecimino@artistactivista.com]  
**Sent:** Monday, December 01, 2008 10:53 AM  
**To:** Davidson, Florene, EMNRD  
**Cc:** info@commongroundunited.org; peter.wirth  
**Subject:** Comments and Inclusion into the Record For Public Hearing  
**Attachments:** Rev Comments on Oil Drilling In Santa Fe County New Mexico.pdf; RECover letter.doc; ecimino.vcf

Dear Florene Davidson with the Oil Conservation Division State of New Mexico

Here are comments and cover letter to be included into the record for consideration of the public hearing schedule this next week. Is there away to give testimony or to be included on the agenda? Please considered this delivered in time from inclusion. I called to find out why the fax has a continuous busy signal. Please check to see if it is functioning properly.

Best Regards,  
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La Cienega Valley  
Citizens for Environmental Safeguards  
CES

RE: Comments and Suggestions for inclusion into Permitting Process of OIL and Gas Leases and/or Drilling and Mining of Fossil Fuel in the Santa Fe County in the Face of Global Climate Change

To whom this may concern:

Here are the comments on Oil drilling permitting and our suggestions we think are mandatory when approving any fossil fuel permit in the state of New Mexico and in particular in the Counties of Santa Fe, San Miguel, Mora, Taos, and Rio Arriba; that unless there are incentives to move to renewable energy this or any permitting agency to continue with business-as-usual policies and permits would also be consider a threat to the global commons and in particular to the local health, safety, welfare and against the will of the people in the County of Santa Fe.

Unless climate disruption is given top priority in the state we will not be able to meet as a region the goals necessary to be carbon neutral by 2020. Anything less will not be enough to stop the acceleration of climate change and would impair our children's ability for to have water, clean water, air and soil to be able to feed them and in fact to continue would be a crime against humanity.

I am available for any questions and conversations regarding our suggestions and appreciate you considering them in advance and inclusion in the record.

Best Regards

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Citizens for Environmental Safeguards  
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**Comments on Oil Drilling In Santa Fe County New Mexico**

Herein, the Petitioner comes forward to file a complaint and comments regarding oil drilling within the County of Santa Fe, New Mexico. We are requesting that the mining of fossil fuel be banned in Santa Fe County; to allow oil drilling in Santa Fe County would be harmful to ground and surface water, to air and soil, and would be seen as crime against humanity, irresponsible ecological behavior, a violation to the people's right to self-governance in Santa Fe County in that the will of the people must be followed in accordance with the oath of office and most importantly it would be a violation against nature in the framework of Climate Change and the Right of Nature to exist in the global commons.

John Adams said, "Government is instituted for the common good; for the protection, safety, prosperity, and happiness of the people; and not for profit, honor, or private interest of any one man, family, or class of men." How could John Adams have seen the environmental and economic crisis? Yet he did know the character of men that which is the blind ambition, unbridled greed and motivation of power.

Oil Drilling in Santa Fe County and who are asking for concessions is the same tactics and operating procedures that multinationals have been using in water privatizations. The concessions favor powerful corporate interests, risk our ecosystems, supports the realization that money would be taken out of the county. Where there is no dividend to the local economy only the threat of more carbon emitted in the development and transport of a resource that will cause further subsidence to the aquifer and threatens the hydrological ability to protect groundwater for

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drinking of the thousands of people who rely on the ultimate natural resource. The costs are reflected in actual and virtual water use, loss of housing values in an already depressed market that ultimately disenfranchise the tax base, and disrupts and undermines the stability of the communities run by oil corporation controllers, lobbyists' micromanaging county policy and corrupt politicians who would rule against the will of people and their right to self-governance.

Today in our nation we have corporate governments and governing corporations each pocketing what the other does best, government pockets money from corporations and corporations' pockets political power.<sup>1</sup> It is all about the accumulation of wealth and resources but when corporations focus on oil resources it threatens water and in the case of the Santa Fe County that is in an increasingly arid climate, threatens to sever the peoples' connection to soil, water and air is to sever their relationship to people, place and property. It comes to mean that water is resource upon which is exploited for its value, for to drill for oil is to impact water. The real value of the environment has been ignored for 50 years. Motivation for profit superseded environmental concerns, now all bets are off because of climate change. We will have to choose what species we save, over precious resources, inequities that oil drilling will cause in accessing and usage of water, exclusions of citizens from self-governance. Openness and transparency has not been the hallmarks of County government in the past nor has the corporate and municipal planning and the purchasing and usage of water or oil and other business affairs, which appears to be moving to allow further privatized interests access, does not allow communities their ownership decisions over resources, how it affects their lives either in water quality or quality of life. Oil drilling would be a 'taking' of the right for clean water to exist unimpeded by the excesses of injection and withdrawal methods and the environmental impacts and damages resulting from the very methods applied and transport.

These corporations are looking at the bottom line and when not seeing profit they will discontinue the services resulting in a clean up that virtually never happens. This is an

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externality cost of environmental ecological economics not included in the scoping, budgets, planning, operations, and clean up and the impacts to water air and soil, to eco systems, bioregions and global commons. Marching in lockstep with governing corporations, the county has hired outside entities to come up with a reorganization of services land use planning, refiguring districts that will be divided into Regional Planning Area (RPAs) that covers district crossovers or could be seen as gerrymandering district boundaries that include river basins and will be responsible for planning growth, extracting resources through mining activities of water, mineral including oil, water quality, supply, waste, and sanitation within the RPA's or district area. Next, to further disenfranchisement appointments to the RPA's may have the appearance of political cronyism by County staff/government, not by the voters and who may no longer have accountability of local' government. The next step that usually follows in these cases is to make meetings closed and secret. The RPA's this may also cut employment in County which has been used as a tactic to hollow out government. In many other cases this has occurred in particular water privatization contracts with municipalities nationally and internationally. Many times the supporters for the reorganization makes unsubstantiated claims that applies to the neo-liberal economic policies, such as reduced government involvement and cutting public sector borrowing until it was as low as it could go with many of the services outsourced to companies that are paid large fees and given lucrative contracts, sometimes up to 25-year contracts and are protected against competition. This creation of private monopolies does not allow for business and causes disenfranchisement of the governing districts and of its citizens.

Any one corporation or public entity that wishes to withdraw resources for large production in the County should be made to pay larger windfall taxes; established regulatory caps, tax and dividends; and will be subject to ordinances passed in the future that protects the people of Santa Fe County which will increase the companies' social responsibility and will outlaw any new resource withdrawals.

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Furthermore, there will be no 'Mutualisation,' of their assets or expenses, of extracting resource corporations or systems, which they could sell the infrastructure to a NGO that would finance capital through borrowing or sub-lease operating systems of the companies.

Needless-to-say, when considering these plans, oil-drilling companies are protecting the shareholders interests, instead of the interests of the people whose water, air and soil will be impacted. The very intention of oil drilling within the County is a hostile taking in the eyes of counties residents and should not be allowed. There is no more milk to give any entity that wishes to use fossil fuels as a resource, that would impact scarce ground and surface water in any way and the county should toss the idea and forbid these types of entities to do business within the County. This is possible to do and should be pursued by the County government, as this is a self-governance right and conveys the wishes of a majority of the residents of Santa Fe County affected. The days of shifting the burden to the taxpayers who foots the bill for cleanup while living with contaminated water are over.

Any type of withdrawal corporation and or individuals must first consider the value of the ecosystems and should be factored into a decision-making, governmental policies or what the tradeoffs are for. The prices for doing business must reflect the full value of water, and how any project will enhance sustainable water use and water/resource conservation. There is an intrinsic bequest value of resources which must be considered value as part of the overall economy. Water value should figure the GDP (Gross Domestic Product) because the figure is calculated based on the price that was paid for, expenses in extraction, transportation and the overall ecological footprint including carbon and the equivalent green house gasses emitted from preplanning to delivery of the end product. Furthermore, in considering real economic value of water will include the cost of supplying, developing, preserving and restoring it. The same is true for emissions issues including the odor of a big and dirty oil business, how will the cost of supplying, developing, preserving and restoring be figured into all mining projects and/or installation extracting programs or projects.

Degradation of water, soil and air resources are not accounted for in the income accounts. This is where a direct diversion or delivery pipelined or dams are reflected as investments and infrastructure where as a aquifers, wetlands, groundwater, streams or watershed are not usually accounted for even if they serve equivalent functions we would like this to be apart of standard operating procedure as part of any plan that comes forward in the County. There must be an accounting for the very resources that all life depends upon.

One fact that is buried in the discussion of oil is water. The longer oil production lasts in a particular place, the more energy and water it takes to develop and or pump. The drilling technique fills a well with more and more water, the deeper the drilling thus causing more energy to pump extracted oil. One of the reasons for increased declines is that what oil is left is harder to extract because of tar sands or other solids. An occurrence took place a few years ago in the High Plains Ogallala where the mixing of brine and fresh water from injection wells caused contamination and destruction of an area wide aquifer. The older an oil well a higher percentage of “*water extracted*” with oil tends to increase. In some cases the water percentage exceeds 99%. Once an oil field’s water production exceeds the installed water capability, production will need to be reduced *or stopped*. When the cost of additional water handling capability exceeds the cost of oil extraction, it stops making economic sense.”<sup>ii</sup> Emphasis added

Any concessions being made on the cost of water for any mining must be made public and is subject to water price hikes throughout the life of any water project as to encourage decreasing reliance of fossil fuels.

Globally, commercial energy consumed for delivering water is more than 26 Quads, 7% of total world consumption.<sup>iii</sup> Some specific examples follow:

**1. Lifting ground water**

$$\text{power needed} = (\text{water flow rate}) \times (\text{water density}) \times (\text{head})$$

For example, lifting water from a depth of 100 feet at a flow rate of 20 gallons per

minute, and assuming an overall pump efficiency of 50%, requires one horsepower.

## **2. Pumping water through pipes**

power needed = (water flow rate)x (water density)x(H+HL) where H is the lift of water from pump to outflow and HL is the effective head loss from water flow in the pipe.

For example, moving water uphill 100 feet at 3 feet per second through a pipeline that is one mile long and 2 inches in diameter, requires 4.8 horsepower.

## **3. Energy needed to treat water**

Average energy use for water treatment drawn from southern California studies is 652 kWh per acre-foot (AF), where one AF = 325,853 gallons.

## **4. Energy needed for desalination**

There is a broad agreement that extensive use of desalination will be required to meet the needs of a growing world population. Energy costs are the principal barrier to its greater use, as well as excessive CO<sub>2</sub> emissions from a coal fire plants and then to consider the water use of nuclear power plants. Worldwide, more than 15,000 units are producing over 32 million cubic meters of fresh water per day. 52% of this capacity is in the Middle East, largely in Saudi Arabia where 30 desalination plants meet 70% of the Kingdom's present drinking water needs and several new plants are under construction. North America has 16%, Asia 12%, Europe 13%, Africa 4%, Central America 3%, and Australia 0.3%. The two most widely used desalination technologies are reverse osmosis (RO; 44%) and multi-stage flash distillation (MSF; 40%). Energy requirements, exclusive of energy required for pre-treatment, brine disposal and water transport, are RO: 5,800-12,000 kWh/AF (4.7-5.7 kWh/m<sup>3</sup>) and MSF: 28,500-33,000 kWh/AF (23-27 kWh/m<sup>3</sup>). This requires as much energy as 1 coal fire plant or 1200 wind turbines.

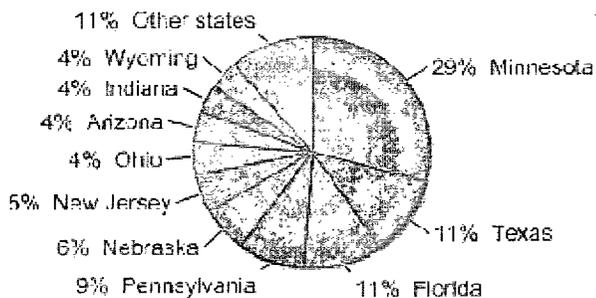
U.S. water withdrawals in 2000, by far the power plant cooling system is the largest user, when total withdrawals (fresh plus saline) are counted. A 500 MWe closed-loop power plant

requires 7,000 gallons per minute (10.1 million gallons per day). Of the 195 million gallons per day used in 2000 for cooling thermal power plants, 70% was freshwater, and 30% saline (only about 3% of this water is actually consumed through evaporation). Nationally, power plant cooling and agricultural irrigation each accounted for 39% of fresh water use.

According to the Arizona Climate Change Plan Arizona emits 59.3 million metric tons of carbon dioxide. Its emissions are expected to increase by 148% over 1990 levels with the transportation and electricity sectors accounting for more than three-fourth – Roughly 77% of Arizona’s total GHG emissions. <sup>iv</sup> **Four Corners** plant is a five-unit, 2,040-megawatt Four Corners Power Plant, located on the Navajo Indian Reservation west of Farmington, New Mexico operated by APS is fueled by low-sulfur coal from the nearby Navajo mine, the plant is owned by APS and five other utilities in the Southwest. APS’ stake in Four Corners makes 782 megawatts of energy available to the APS system.

*According to the same figures used in the Georgia model it will take 1200 wind generators to replace the Four Corners Coal fire Plant. The economic incentives for the Navajo people are high and would be on the cutting edge of electrical generation. Plus, the savings of 55,000 afy of water plus pollution of the coal mining slurry, of the transport and what it produces which are not currently factored into this equation .i.e. healthcare, ecosystems etc.*

**Mining freshwater withdrawals, 2000**



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*Figure 1 Data table for the pie chart are available USGS. New Mexico State agencies have failed to comply with federal inquiries for freshwater use within state for various industries including mining, agriculture and the use for domestic and municipal use.<sup>v</sup>*

For 2000, an estimated 3,490 Mgal/d, or 3,920 thousand acre-feet per year, were used.

Mining withdrawals were nearly 1 percent of total withdrawals and less than 2 percent of total withdrawals for all categories excluding thermoelectric power. Ground water was the source for 58 percent of total withdrawals for mining. Most of the ground-water withdrawals for mining (62 percent) were saline, and most of the surface-water withdrawals (85 percent) were fresh water. Saline ground-water withdrawals and fresh surface-water withdrawals each represented 36 percent of the total withdrawals for mining.<sup>vi</sup>

Coal mining slurry drainage is formed when pyrite, an iron sulfide, is exposed and reacts with air and water to form sulfuric acid and dissolved iron. Some or all of this iron can precipitate to form the red, orange, or yellow sediments in the bottom of streams containing mine drainage. The acid runoff further dissolves heavy metals such as copper, lead, mercury into ground or surface water. The rate and degree by which acid-mine drainage proceeds can be increased by the action of certain bacteria. Acidic, metal-laden drainage from abandoned coalmines can have substantial effects on aquatic resources. Problems that can be associated with mine drainage include contaminated drinking water, disrupted growth and reproduction of aquatic plants and animals and the corroding effects of the acid on parts of infrastructures such as bridges. As with any environmental damage, there are costs associated with trying to come up with a solution to the problem not actually mitigating pollution or clean up. In the Appalachian region of West Virginia, for example, the cost of correcting acidic mine drainage-related problems with currently available technology is estimated at \$5–\$15 billion.<sup>vii</sup> When factoring in water into the mining cost the total including electric production is closer to 60,000 afy or more depending on the quality of coal and the washing processes used. Many of the same issues represented in coal mining appear in the oil extracting.

Scarcity comes in different forms in some regions and economies where water scarcity is a physical matter, in other it is an issue of economic or sociopolitical access. Physical scarcity is where water is used to 75% of more of water flows are withdrawn for agriculture, industry or domestic use. Therefore, it is about ACCESS to clean water when the experts figure these numbers. You could live in a wet area of the world, yet have no access to water or visa versa live in dry areas and may not be water scarce if there is access to meet water demands. Las Vegas, Nevada, is an example of access and excess. Economic scarcity occurs when there are limitations to keep people from gaining access of water especially when there is enough locally to supply the

population, for instance financial, infrastructural, institutional or human reason to accessing water and situational limitations.<sup>viii</sup>

While the distinction of the water constraints are from the water resources and the management of them, shortages come from economies, rising populations and changing lifestyles and now add to this mix, global climate change. This results in the demand and competition of water resources. It is obvious that water is incorrectly managed and is vulnerable to overexploitation, pollution and increasingly scarce to our future demand and a current needs.

The choice that must be made to change the over allocated water for different needs have to be made in better ways. As recognition of the value of water is increased for the economies that depend on it and the pending shortages that are sure to result, it is an opportunity to move toward a sustainable global economy by the way water is used. In this way water becomes an economic imperative through sustainable management rather than a luxury available to those who can afford it. Moving in this direction requires a direction that changes the way water is viewed and managed. The practical steps include, inclusive and transparent decision-making, investments in new technologies to enhance water use, efficiency and water productivity and a careful alignment of economic signals and incentives.

West of the 100° meridian in the United States surface and groundwater is a scarce resource. While there have been wet years there are mostly arid and semi arid conditions with the spread of desertification advancing. There most likely will be droughts and then extreme storm events that will cause a scouring of the landscape, in arroyos, streams, and rivers with flooding that kills people and destroys property. Sometimes these are surprise events. There are increasing trends of storm intensities and of hurricanes as we have witnessed over the past ten years. Decisions made in water management should not be made based on past variable data because there have not been enough global warming studies on extreme storm events, droughts and whether existing infrastructure can handle the impacts. Careful evaluation of extreme weather events should be considered on planning water projects and programs. Most water systems already have problems

and stresses and have not been considered in context of how climate change will affect them. Water managers and planners are for the most part practicing a business-as-usual approach. According to Gleick et. al. of the Pacific Institute, threshold events will become more probable and non-linear changes and surprises should be anticipated, even if they cannot be predicted. There is also an important point in the problem solving process and that is,

“The time lags between identifying the nature of the problems, understanding them, prescribing remedies, and implementing them are long. It is important to take proactive step in order reduce the related risk which would be more costly if not anticipated which of course uncertainty needs to be incorporated into the decision process.”

The most telling part of the key messages that Gleick et al raises,

“While some of the actions should be taken now, expensive and long-term new infrastructure should be postponed until adequate information on future climate is available. If postponement is not possible, a wider range of climate variability that provided by the historical record should factored into the infrastructure design.”<sup>ix</sup>

Sustainable water economies offer social, economic, regulatory, incentives needed to be aligned to promote:

- Water use patterns that are sustainable,
- Water allocations that enhance current and future public welfare; and
- Water investments to technologies and practices that promote efficiency, water quality, conservation and ecosystems integrity, conservation and ecosystem integrity<sup>x</sup>.

If we continue without changing now, there will not be enough water to feed the world by 2020-2050, but the way climate change appears to be accelerating this may come sooner than later. Today water use patterns are not sustainable. Entrenched interests need to be aware that lifestyle trends and the gestalt of the residents of Santa Fe County has changed and shifted toward sustainable and carbon neutral practices and the citizens have a much different vision for the

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future than to continue down the path of fossil fuel extraction, development, usage and unaccountable consumption.

Citizens for Environmental Safeguards considers the oil corporations or any other company or entity attempts to withdrawal resources both oil and water that impacts the aquifer and surface waters are hostile actions in that they have not considered the implication of their actions to climate change, the impacts on to drinking, ground and surface water; that their corporate activities may cause irreconcilable impacts to water, air and soil of the ecosystems, bioregions and has global implication of adding to global warming and climate change should cease and desist from the planning and operations of oil drilling or other mining activities in the County of Santa Fe, in the State of New Mexico; we will consider further action and means including litigation to address the necessary prevention, adaptation and mitigation.

Respectfully,

Elaine Cimino

Director Citizens for Environmental Safeguards

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<sup>i</sup> Dorothy Green, *Managing Water: Avoiding Crisis in California*, University of California Press, 2007

<sup>ii</sup> Gail Tverberg, "The Peak Oil Overview," The Oil Drum.com discussion about Energy and our future. 6/19/2008

<sup>iii</sup> Dr Allan Hoffman, *Ibid.*

<sup>iv</sup> <http://www.azclimatechange.us/ewebeditpro/items/O40F9347.pdf>

<sup>v</sup> GAO Freshwater Report

<sup>vi</sup> <http://ga.water.usgs.gov/edu/wumi.html> Note: For 2000, the estimate of mining water use for the United States was based on estimates of total withdrawals for mining in 22 States, rather than on estimates from all States. These 22 States included the 12 States with the largest mining withdrawals during 1995, and 10 other States in which mining water-use data had been collected as part of a broader State water-use program for 2000. The 22 States that reported for 2000 accounted for 83 percent of the total mining water

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withdrawals during 1995. During 1995, withdrawals for mining accounted for a small percentage of the total water use, less than 1 percent of the total water withdrawals for all categories.

<sup>vii</sup> <http://ga.water.usgs.gov/edu/wumi.html>

<sup>viii</sup> Ger Berkamp and Claudia W Sadoff, "Water in a Sustainable Economy" Worldwatch Institute pgs107-122

<sup>ix</sup> Peter H. Gleick et al U.S. Global Change Research Program; "Water: the Potential Consequence of Climate Variability and Change of the Water Resources of the United States," that was supported by the U.S. Department of the Interior and the U.S Geological Survey. "Key messages for water managers, planners and interested members of the public." Page 13

<sup>x</sup> Ger Berkamp and Claudia W Sadoff, "Water in a Sustainable Economy" Worldwatch Institute pgs107-122