

**Fax – 20 pages in total including cover sheet**

**PLEASE CONFIRM RECEIPT via email to [rita.beving@gmail.com](mailto:rita.beving@gmail.com)**

**Via Fax – 505.954.2010**

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February 19, 2016

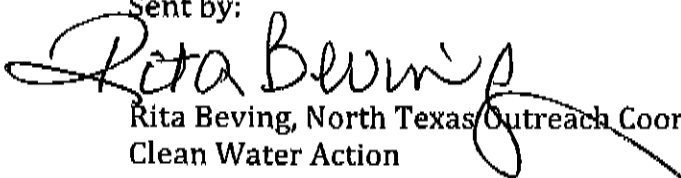
The following 20 pages of comments by Clean Water Action Texas regard the:

Environmental Assessment DOI-BLM-NM-040-2015-061-EA for the April 2016  
Competitive Oil and Gas Lease sale in Texas, Kansas and Oklahoma

Regarding Parcels:

1. Lewisville Lake (NM-201604-044)
2. Somerville Lake (NM-201604-038, NM-201604-039, NM-201604-040, NM-201604-041, NM-201604-042, NM-201604-043)
3. Choke Canyon (N NM-201604-013, NM-201604-014) and
4. Lake Conroe (NM-201604-016)

Sent by:

  
Rita Beving, North Texas Outreach Coordinator  
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Note:

Documents mentioned within this comment letter will be sent via CD or  
Via a package to the BLM office.

*This filing is pursuant to 43 C.F.R. § 31201-3.*

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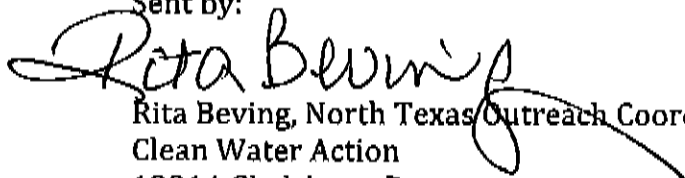
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## **I. Comments on Environmental Assessment in Regards to Parcels Adjacent To or Below Texas Lakes**

The following comments by Clean Water Action Texas regarding the Environmental Assessment DOI-BLM-NM-040-2015-061-EA for the April 2016 Competitive Oil and Gas Lease sale of more than 36,000 acres of parcels in Texas, Kansas, and Oklahoma.

Within the Environmental Assessment (EA) the Texas office of Clean Water Action is focusing its comments primarily on the parcels adjacent to or underneath the following four Texas lakes including:

5. Lewisville Lake (NM-201604-044)
6. Somerville Lake (NM-201604-038, NM-201604-039, NM-201604-040, NM-201604-041, NM-201604-042, NM-201604-043)
7. Choke Canyon (N NM-201604-013, NM-201604-014) and
8. Lake Conroe (NM-201604-016)

Though our comments are limited in scope, we also have great concern regarding the implications drilling operations may also have on parcels related to the Nueces river, the tributaries and wetlands associated with Sabine, Sam Houston, and Davy Crockett national forests.

Clean Water Action has more than 44,000 members in cities and counties in Texas. Our goals include clean, safe and affordable water; prevention of health threatening pollution. Our members who live in the Houston metropolitan area, Corpus Christi, the Dallas-Ft. Worth Metroplex, and Brenham rely on the water supplies, adjacent to these parcels, as drinking water. Our members also utilize the Sabine, Sam Houston, and Davy Crockett National Forest for recreational purposes such as hiking, birding, fishing, etc. We are concerned about the negative impacts that could result to the quality of surface water and drinking water, the possible impact to the dam infrastructures, and to the natural areas where our members recreate.

Therefore, we are submitting these 20 pages of comments on behalf of our members who could be affected by this proposed April 20<sup>th</sup> sale:

Sent on behalf of our organization's members and supporters:

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### ***Identified Issues Insufficiently Addressed***

On page 7, under section 1.4 Identification of Issues, the BLM states it was charged in the Environmental Assessment "to identify and consider potentially affected resources and associated issues." In relation to these parcels and their adjacent water supply lakes, their aquifers, watersheds, and soils, we find that staff did not address the following questions in its charge, even to the most basic degree. We also find that neither the recreational and economic impacts nor the public safety issues that could result from drilling were sufficiently addressed.

The questions BLM staff was charged with answering in the EA include:

#### ***1) What effect with the proposed action has on the watershed condition?***

*The 3.3 Water Resources section provides no basic analysis on surface water and groundwater sources related to these parcels adjacent to or underneath these four water supply lakes.*

*There is no identification of ANY of the related aquifers or discussion of the river basins or watershed areas near these named lake parcels. The only aquifer mentioned is the Ogallala Aquifer which is totally unrelated and located in far West Texas – hundreds of miles away from any of these parcels. (See EA page 33). There is discussion about Lake Texoma under the subheads "Houston County" and "Live Oak County" on page 22, but Lake Texoma bears no relationship whatsoever to these parcels.*

This following information should've been included or explored in the EA:

Lake Lewisville is located within the Trinity River Basin. It is located on the Elm Fork, a tributary of the Trinity River.<sup>1</sup> It is affiliated with the Trinity and Woodbine aquifers; impacts on these two reservoirs should have been explored.<sup>2</sup>

Choke Canyon Reservoir is located within the Nueces River Basin. It is on the Frio River.<sup>3</sup> The area is affiliated with the Gulf Coast aquifer and other minor aquifers.<sup>4</sup> Water flows from the dam down the Frio River to the Nueces River and onto Corpus Christi thirty miles away. The Frio River drainage area lies above the dam.<sup>5</sup>

Lake Conroe is part of the San Jacinto River Basin. It was formed by a dam on the San Jacinto River and is associated with the Gulf Coast aquifer.<sup>6</sup> The watershed lies in the Gulf Coastal Plains and spans Montgomery, Walker, and Grimes counties.<sup>7</sup>

According to the Lake Conroe Association, the aquifer has now decreased to a level where it may not be able to "recharge" itself. Starting in 2015, Montgomery County will be limited to drawing no more than 64,000 acre feet per year.<sup>8</sup>

According to the Houston Advance Research Council, the underlying aquifer on Lake Conroe replenishes slowly, often at a rate of less than an inch a year. It took as many as 40,000 years for groundwater to accumulate in parts of Montgomery County, a U.S. Geological Survey study found in 2013.<sup>9</sup>

Somerville Lake was built on the Yegua Creek within the southeast portion of the Brazos River Basin.<sup>10</sup> Somerville Lake overlays parts of the Carrizo Wilcox aquifer and the Gulf Coast aquifer. It is fed by four streams - the East Yegua Creek, Davidson Creek, Middle Yegua Creek, and Yegua Creek.<sup>11</sup>

Three of nine major Texas aquifers related to these dam impoundments were ignored in this Environmental Assessment including the Gulf Coast aquifer, the Carrizo Wilcox, and the Trinity aquifer. Minor aquifers were also not included.

Lake Lewisville is a major drinking water supply for the DFW region and neighboring communities.<sup>12</sup> Somerville Lake provides drinking water for the city of Brenham.<sup>13</sup> Lake Conroe has been a major drinking water supply for Houston and Montgomery County.<sup>14</sup> Choke Canyon is a water source for Corpus Christi.<sup>15</sup>

According to the EPA, 60% of contamination from drilling activities is due to actual soil contamination.<sup>16</sup> These water supplies could be impaired due to runoff of a well pad site or runoff from contaminated soils in a heavy rain. None of these cities can afford their water supply lakes to have water quality diminished due to drilling operations.

## ***2) What effect will the proposed action have on soil loss and contamination?***

*All the proposed lake parcels in this EA are adjacent to or underneath water impoundments that are more than 30 to 60 years old. These reservoirs are all earthen dams or have major earthen components. There is no analysis of the soils put forward in the EA discussing the soil conditions of these lake parcels to get a sense of the implications for a) possible erosion due to induced seismicity or b) possible contamination impacts in relation to these four water supply lakes.*

According to the Army Corps of Engineers, the life span of a dam is 50 years.<sup>17</sup>

Lewisville Lake's earthen embankment serves as its main water barrier. It also utilizes a concrete spillway and an outlet to relieve water from the dam during major flood events.<sup>18</sup> The foundation of Lewisville Lake is comprised of homogenous fill constructed of impervious Alluvium clays and shale.<sup>19</sup>

Lake Conroe is rated "good" for its water quality.<sup>20</sup> Soils there are akin to forest soils formed from unconsolidated clay, sandy, sandy clay or clay shale materials. Soils range from slightly to severely erosive.<sup>21</sup> The San Jacinto River Authority notes that the lake is susceptible to stormwater runoff.

Somerville Lake was built on the Yegua Creek within the Brazos River Basin.<sup>22</sup> The soils of the drainage area are mostly sandy loams with smaller amounts of clay loams and gravelly clay loams.<sup>23</sup>

Choke Canyon Dam is founded entirely on the Catahoula Formation except for the deeper excavations, which encountered the uppermost portion of the underlying Frio Formation. The Frio Formation was encountered in the excavations for the spillway stilling basin and in the area extending from Charley York Creek to the outlet work's stilling basin.<sup>24</sup>

***3) What effect will the proposed action have on water quality in stream systems?***

*Again, there is no basic discussion of what effects the "proposed action" on these parcels may have on stream segments related to these reservoirs – or the possible impacts to water quality. There is growing concern about contamination and increased seismicity by drilling and hydraulic fracturing – so much so that it has prompted water wholesalers, the Army Corp of Engineers and other entities to initiate studies in that regard. (See seismic discussion that follows).*

***4) What effect will the proposed action have on recreation areas or on BLM owned land systems?***

*Though the EA admits there is recreation in the state of Texas, there is no discussion of the recreational activities surrounding these specific lake parcels or forestlands.*

These lakes not only provide recreational activities including birding, camping, hiking, boating, canoeing, to their localities but also support the economies tied tourism and lake-related services are vital to these lakes.

This may be especially true in regards to the 160,000-acre Davy Crockett National Forest as the proposed parcels total more than 28,000 acres – or more than 17.5% of the forest's total land mass.<sup>25</sup>

***5) What effect will the proposed action have on state and local economies?***

*Though the EA may have effectively stated the latest population, economic, and employment figures for the entire State of Texas, none of the local economies surrounding these lake communities adjacent to the proposed parcels are addressed even in the most cursory manner.*

*Recreation dollars, and in turn the local businesses that benefit from them, plus the flood control and water supply economies these water supply lakes provide to their local region, and in turn to the state are significant.*

According to the Army Corps of Engineers, water supply benefits from Lake Lewisville total \$206 million. Annual recreation benefits are \$21.3 million. Its hydropower benefits are \$552,475 annually.<sup>26</sup>

Lake Conroe has commercial and residential development around its shores. As stated earlier, there are now limits set on water withdrawals on Lake Conroe and its drinking water supply. Should any contamination occur from drilling operations, it could impair the water quality of this drinking water supply. A risk analysis should be put forward on how seismicity may affect this Lake's earthen dam.

Due to the 2011 severe drought, an analysis by Texas A&M was conducted for Lake Conroe and Montgomery County regarding water loss and affected economics. Researchers determined that for each foot of lake-level decline beyond the first two feet at Lake Conroe, retail trade revenue in the City of Montgomery would decrease about \$414,000 per quarter per foot, or about \$1.6 million per year per foot. Residents who own lakefront property during a drastic water level reduction in Lake Conroe could expect a 28% decline in residential property values, which would translate to \$1.1 billion of loss to the area.<sup>27</sup>

Both Lewisville Lake and Lake Conroe are popular recreational areas with businesses related to tourism and boating. Lake Somerville and Choke Canyon both have state parks and nearby communities that could be affected should the water become contaminated or their dams affected with major water losses.

#### ***6) What effect will the proposed action have on public health and safety?***

*The issue of public health and safety was listed in Section 1.4 Identification of Issues but dismissed by the BLM as the agency noted there would be "no potentially significant effects related to these issues resulting from the alternatives presented."*

*On the contrary, the drilling activities on parcels adjacent to or underneath these lakes could threaten water quality with contamination. Additional drilling could induce seismicity and could wreak havoc with dams that are extended beyond their expected lifetime of service. Should these water supplies become impaired due to contamination or there be a breach in the dam, the results could be devastating for the communities that rely upon these reservoirs for water, for flood control, and for their economies.*

*There are a number of risks identified with not only the possible contamination that drilling on these parcels may have on these water supply lakes, but what induced seismicity could do to impair dam structures.*

#### ***The Concern of Possible Water Contamination in Texas Lake Parcels***

Lake Lewisville is one of Dallas/Ft. Worth's major water supplies.<sup>28</sup> Somerville Lake is a water supply for the city of Brenham.<sup>29</sup> Lake Conroe is a major water supply for

the City of Houston, all of Montgomery County, and portions of Waller, Grimes, Walker, San Jacinto, and Liberty counties.<sup>30</sup> Choke Canyon reservoir is a water supply source for Corpus Christi.<sup>31</sup>

In June 2015, the EPA released a study entitled *"Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Sources."* The EPA notes that there are several mechanisms by which a spill with chemical additives can potentially contaminate drinking water sources.<sup>32</sup> These include:

- Overland flow to nearby surface water;
- Soil contamination and eventual transport to surface water;
- Infiltration and contamination of underlying groundwater.

The EPA gathered spill data from 11 states between 2006 and 2011 for this study. These estimates included spills of hydraulic fracturing fluids and chemicals, and produced water reported in state databases including Texas.<sup>33</sup>

Spills can occur by overland flow to nearby surface water, soil contamination and eventual transport of surface water, and to the infiltration and contamination of underlying groundwater. Of the 151 spills analyzed by EPA, fluids reached surface water 9% of the time, while 64% were due to contaminated soils.<sup>34</sup>

Contaminated soils can result in the migration of those chemicals to water via heavy rains and runoff.

Accompanied with this study was an excel spreadsheet named *"Appendix B: Hydraulic Fracturing-Related Spills Table."* The spills listed related to before or during the mixing and injection of hydrofracturing fluids, or during flowback.<sup>35</sup>

Within Denton County in the EPA table, there were 9 spills identified by the Texas Railroad Commission between 2006 and 2010 or self-reported by industry. These spills ranged from 357 gallons to 11,970 gallons.<sup>36</sup>

The majority of the spills were related to flowback and produced water. The spills' causes were attributed to human error, equipment failure, and storage. It was unknown whether there was groundwater contact in some of these incidents, but according to the EPA, this can take several years to detect.<sup>37</sup> Though we were unable to research (due to time constraints) whether any of these spills were near Lewisville Lake, the spills did occur in Denton county where the lake is located.

Injection wells were also discussed in the June 2015 EPA study. There are two major surface mechanisms by which the injection of fluid and the creation and propagation of fractures can lead to the contamination of drinking resources: (1) the unintended movement of liquids or gases out of the production well or along the outside of the production well into a drinking water resource via deficiencies in the well's casing or cement, and (2) the unintended movement of liquids or gases from the



production zone through subsurface geologic formations into a drinking water resource. A combination of these mechanisms are also possible.<sup>38</sup>

A peer-reviewed study released in June 2015, "*A Comprehensive Analysis of Groundwater Quality in the Barnett Shale Region*" conducted by Dr. Zach Hildenbrand along with 15 contributors cites 550 groundwater samples collected and analyzed from public and private water wells overlying the Trinity and Woodbine aquifers in the Barnett Shale formation of Texas.<sup>39</sup>

The Trinity and Woodbine aquifers are affiliated with Lewisville Lake.<sup>40</sup> Samples were collected from 12 counties in the Barnett Shale, including Denton County.<sup>41</sup>

The peer-reviewed study results constitute "the largest analysis of groundwater quality overlying a shale formation associated with unconventional oil and gas activities (UOG)." The study found elevated levels of 10 different metals and the presence of 19 different compounds, including benzene, toluene, ethyl benzene, and xylene (BTEX).<sup>42</sup>

Multiple volatile organic compounds were detected throughout the region, including various alcohols, a BTEX family of compounds, and several chlorinated compounds. "Though Hildenbrand's data does not necessarily confirm unconventional oil and gas activity (UOG) as the source of contamination, these are compounds related to hydraulic fracturing. At the very least, this analysis provides an impetus for further monitoring and analysis of groundwater quality in the Barnett Shale region."<sup>43</sup>

Two studies by Saiers (2012)<sup>44</sup> and Darrah (2014)<sup>45</sup> have indicated that hydraulic fracturing could potentially alter the pathways of contaminants to aquifers via flow through existing fractures widened by unconventional oil and gas activities.<sup>4</sup>

Though some of the facts here relate specifically to the Barnett Shale and drilling activities in Denton County where Lewisville Lake is located, it is reasonable to assume that drilling activity could contaminate the soils or water related to all of the lakes related to these parcels – all critical drinking resources for major cities and their surrounding communities.

***Details Re: The Concern of Seismic Activity Near or Under Texas Lake Parcels and the Need for Soil Evaluation and Geological Analysis***

Addressing the soils, which underlie these parcels and their adjacent dam areas, are important to ensure the integrity of the impoundments of these water supply lakes.

The Corps has stated that the life span of a reservoir is 50 years.<sup>46</sup> Lewisville Lake was built in 1955.<sup>47</sup> Somerville Lake was completed in 1967,<sup>48</sup> Choke Canyon was built in 1984.<sup>49</sup> Lake Conroe was built in 1973.<sup>50</sup> All the aforementioned lakes are over 30 to 60 years old.

All four lakes are primarily earthen dams.<sup>51</sup> Some have already experienced embankment erosion problems.

In a June 2011, a memo was distributed by the Southwest Division of the Army Corps of Engineers. The memo discussed the establishment of a new 3000 foot setback for oil and gas activities in close proximity to dams and levees. The Corps cited the developments in the Barnett Shale, the Caney Shale in Oklahoma, the Fayetteville Shale in Arkansas, and the Haynesville Shale in northwest Louisiana and Texas.<sup>52</sup>

The basis for why the Corps was initiating this setback was that "there is concern that the disruption to the geologic structure of natural gas shale formations could result in subsidence of the underground structures supporting dams, resulting in damage to the dams and associated structures."<sup>53</sup>

Additionally, the memo stated, "Effective immediately, a 3,000 foot lateral exclusion zone shall apply for all projects within the CESWD [Corps of Engineers SouthWest District]. Within this exclusion zone, no surface occupancy and no drilling (including horizontal drilling) will be allowed within 3000 feet of critical facilities such as dams, embankments and other areas critical for project operation...."<sup>54</sup>

The Corps also prohibits oil and gas exploration and production activities within 2000 feet underlying Corps flood control projects wherein the U.S. owns the minerals.<sup>55</sup>

In 2011, the City of Grand Prairie implemented a moratorium on drilling near the Eagle Mountain Creek dam.<sup>56</sup> This lake was also noted as "high risk" and is located within the Barnett Shale.<sup>57</sup>

In a Dallas Morning News article, "*Corps worries that fracking gas wells may hurt dams*," regarding the Joe Pool Lake moratorium, Stephen Wright, a professor of civil, architectural and environmental engineering at the University of Texas, stated that problems with clay shales have led to at least two dam failures in Texas, although neither resulted in deaths. He noted the Corps was right to err on the side of safety.<sup>58</sup>

As noted earlier, Lewisville Lake, Lake Conroe, and Somerville Lake all have some forms of clay in their soils. There needs to be further analysis of the soils around these lakes and Choke Canyon to ensure that additional induced seismicity from drilling does not impair these impoundments.

In Nov. 2012 a second Corps memo and report entitled "*Dam Safety Modification Report -Project Plan Review*" put forward a plan to secure approval for "risk reductions" at Lewisville Lake.<sup>59</sup>

The Corps assessed Lake Lewisville and subsequently assigned a Dam Safety Action Classification (DSAC) of II (High Risk), in 2008 with respect to the following Potential Failure Modes:

1. Foundation Seepage and Piping considered Probably Inadequate under Normal-Unusual-Extreme loading conditions based on foundation pressures projected from instrumentation and current seepage and uplift conditions being monitored.
2. Spillway – Erodibility considered Probably Inadequate under Extreme loading conditions based on observed structural distress from soil loading, as well as the erodibility of the foundation in the weathered Clay Shale.
3. Embankment Foundation Stability considered Probably Inadequate under Extreme loading conditions based on existing stability and seepage conditions.<sup>60</sup>

In examining the factors for review, the Corps noted “Lewisville Lake is not located in a seismically active region, historically. However, recent activity in the region requires further evaluation.”<sup>61</sup>

In 2013, an Army Corps senior geotechnical engineer raised issues of concern regarding seismicity in a powerpoint entitled, “*Potential Impacts of Hydrofracturing on Dam and Levee Safety*” that was presented at a January 29, 2013 meeting (she was also the engineer of contact for the 2011 3000’ setback memo).<sup>62</sup> In this presentation, she mentions that the Corps is evaluating the potential risks related to drilling, injection, extraction, and hydrofracturing.<sup>63</sup>

The presentation outlined the following risks:

-Induced seismicity which included these related effects:

- 1) Consolidation of granular drains
- 2) Liquefaction
- 3) Stability
- 4) Cracking
- 5) Displacement

- Transmission of fracking fluid outside target zone via natural faults
- Erosion of embankment in contact with faults could trigger failure -
- Disposal of flowback water
- Potential for contamination of ground and surface water<sup>64</sup>

The presentation went on to say that wells can be fractured multiple times, so project risk associated with fracking can occur over the life of a well.<sup>65</sup>

The Corps powerpoint also stated that “poorly controlled hydrofracturing” could lead to the “Erosion of the embankment along existing faults located in the

foundation, abutments or outlet works [which] could lead to project failure (Failure was defined as an uncontrolled loss of pool or flood storage)."<sup>66</sup>

The presentation concluded by saying "Dams and Levees are often many miles long. Lots of different geology [are located] over those footprints. Mitigation for HF [hydraulic fracturing] was not incorporated into project design. Projects are only as strong as the weakest link."<sup>67</sup>

Lewisville Lake is the oldest of the four lakes with a 258.9 acre parcel for auction in this 10-year mineral rights sale.

Lewisville Lake's earthen embankment serves as its main water barrier. The foundation of Lewisville Lake is comprised of homogenous fill constructed of impervious Alluvium clays and shale.<sup>68</sup>

Lewisville Lake is located within the Barnett Shale. The Dallas/Ft. Worth area, downstream from Lake Lewisville, has now experienced numerous earthquakes.

The US Geological Survey (USGS) has determined that the region's risk of damaging earthquakes has more than tripled since 2008.<sup>69</sup>

According to the Corp, Lewisville Lake is a "high risk" dam and is rated as the 8<sup>th</sup> most hazardous in the country by the agency.<sup>70</sup>

The Lewisville Lake dam needed embankment repairs in 1995.<sup>71</sup> The lake is currently undergoing a \$6.4 million repair after a 161-foot long, 23-foot wide breach after heavy rains in the spring of 2015.<sup>72</sup> More extensive repairs are forecast for the near future.<sup>73</sup>

The Corps "*Safety Facts for Lewisville Dam*" portion of its website estimates that a breach or catastrophic flood would put 431,000 people, 53,000 structures, and place \$21.1 billion of land and property at risk. A less severe flood event without a breach could place 240,000 people at risk with \$9 billion of land and property at risk.<sup>74</sup>

According to the Corps, those DFW communities closest to the dam would be at risk should there be a breach. Those cities most at risk include Lewisville, Coppell, Carrollton, Farmers Branch, Irving and Dallas. Should the dam breach at full capacity, the arrival time of flood waters to Dallas or Lewisville per a Corp map is 1 hour with the potential loss of life highest for those living within a few miles.<sup>75</sup>

A former oil and gas geologist and GIS expert has mapped lineaments under the Lewisville Dam (See attached). There are 3 lineaments that converge from Lewisville Lake toward critical dam infrastructure. One of these lineaments starts in the area where this new drilling parcel is sited.

### ***Lake Parcels Should be Pulled from Sale – Environmental Impact Study Required***

More research is needed in regard to fracking and seismicity's effects on dams. There is mounting evidence that other entities other than the Corps are concerned about the impact of fracking on dams and levees as major water providers are initiating studies regarding seismic risk to water supply reservoirs.

A three-year, \$1 million project started in September 2015, funded by the Tarrant Regional Water District (TRWD), one of the three largest water providers in the DFW area that provides water for Ft. Worth and its neighboring communities. Tarrant Regional owns and operates four major reservoirs, providing water to more than 1.7 million people.<sup>76</sup>

University of Texas at Arlington engineers have initiated a three-year study, analyzing soil properties at the Eagle Mountain Dam and Lake, in North Texas, to determine the dam's seismic stability and to develop a reliability-based system that they say could be used to inspect and rate other dams and similar structures."<sup>77</sup>

The senior UTA researcher of the project has noted, not unlike the Corps concerns regarding when dams were built, that most of the region's dam infrastructure "was not built to withstand seismic events."<sup>78</sup>

Officials are stating that since part of Eagle Mountain Lake was constructed with hydraulic fill, that this embankment "warrants investigation since similarly constructed dams have failed as a result of seismic events."<sup>79</sup>

Gerald Bartz, a GIS expert and former oil and gas geologist has recently mapped lineaments under the proposed Lewisville Lake parcel. See attached. In making public comment before the Hickory Creek City Council on Feb. 16, 2016 where he presented his findings regarding the dam, he stated, "If one of my oil and gas employers had looked at what I found and asked me if we should drill there, I would have replied 'we don't have enough insurance to go there.'"

The cities of Dallas, Lewisville, Denton, Hickory Creek, The Colony and Highland Village have sent or are will file "protests" against this proposed parcel on Lake Lewisville.

The conclusion is that the DFW region can't afford the BLM to gamble with a major reservoir's water quality, or risk the integrity of Lewisville Lake dam by increasing the drilling load and induced seismicity on the structure of this reservoir.

## **Conclusion**

***Clean Water Action feels that not only should these lake parcels be pulled, but also the sale should be stopped for the following reasons:***

***A) The public was given two deadlines of Feb. 18<sup>th</sup> and Feb. 19<sup>th</sup> for protest comments. Both dates were published in newspapers in Texas – and proved confusing to both officials and the public on what the actual deadline for comment was to be.***

***The posting of deadlines with accuracy is the most fundamental premise of public comment of any federal or state agency. This is a denial of due process for the public.***

***B) This Environmental Assessment is flawed and doesn't meet the requirements of the National Environmental Protection Act. The most basic information regarding lake parcels was not given in relation to water, watersheds, aquifers, soils, recreational areas or possible economic harm.***

***C) The EA for the proposed April sale is riddled with errors and omissions regarding the most basic information as it relates to these parcels. Maps are completely missing on numerous parcels. There are aquifers, counties, and lakes noted which have no bearing on any of these parcels up for auction.***

***The BLM should pull ALL of the parcels offered – not only Lewisville Lake, Somerville Lake, Lake Conroe, and Choke Canyon Reservoir, but all parcels due to the lack of diligence on the part of the BLM. The risks to these lakes from oil and gas operations could be catastrophic to those that rely on these water supplies and for those that live in harm's way downstream. The lack of information on issues related to these water supplies and the forests is disconcerting.***

- 1 Texas Water Development Board, "Lewisville Lake (Trinity River Basin)," website  
<http://www.twdb.texas.gov/surfacewater/rivers/reservoirs/lewisville/>
- 2 Region C Water Planning Group, 2016 Water Planning Group, Chapter 1.2, Water-Related Physical Features in Region C, p. 1.1  
<http://www.twdb.texas.gov/surfacewater/rivers/reservoirs/lewisville/>
- 3 U.S. Department of the Interior, Bureau of Reclamation. "Nueces River Project," website,  
[http://www.usbr.gov/projects/Project.jsp?proj\\_Name=Nueces+River+Project](http://www.usbr.gov/projects/Project.jsp?proj_Name=Nueces+River+Project)
- 4 US. Dept. of Interior, Bureau of Reclamation, "Choke Canyon Overview," website,  
[www.usbr.gov/projects/Facility.jsp?fac\\_Name=Choke+Canyon+Dam](http://www.usbr.gov/projects/Facility.jsp?fac_Name=Choke+Canyon+Dam)
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## II. Environmental Assessment Errors for Texas Parcels

### A. ERRORS Related to Notice/Deadlines

- a. Two "protest" deadlines were posted - both Feb. 18 and Feb. 19.

### B. ERRORS Related to Contradictory BLM Statements or Unrelated Representations in BLM's own writing of the Environmental Assessment (EA) as it relates to Texas

- a. Factual information including the number of parcels offered and the location of parcels contradict the BLM's own statements within this document.
- b. There are discussions in the EA referencing totally unrelated Texas counties *i.e.* Grayson. Unrelated waters such as Lake Texoma are referenced along with the Ogallala Aquifer which is located in Northwest Texas - both unrelated to any of the parcels discussed and are literally hundreds of miles from the areas they are referenced within.
- c. Maps of Texas parcels that are referenced on pages 12-16 (see comments below) are totally omitted in the Appendix 2.. Maps indicating parcel areas within map pages are missing.

### ERRORS under 2.2 Alternative B: Proposed Action

ERROR: p. 9 , the BLM indicates 18 parcels for sale in the Davy Crockett National Forest - **there are 21 parcels listed p. 12-16.**

ERROR: p. 9 the 5<sup>th</sup> bullet claims there is a total of 28,226.61 acres proposed for sale in the Davy Crockett National forest, when in fact when you total up the parcels from p. 12-16, there are 28,380.03 acres. **That is a discrepancy of 163.42 acres** - what parcels aren't included and how is anyone to know?

ERROR: p. 9 The first sentence states that "The proposed Action would be to lease Federal minerals on "43 of the 44 nominated lease parcels." **But when one totals up the bulleted parcels listed underneath this statement - it only adds up to 42.** The total parcels don't add up with the first sentence even with #10 eliminated as stated on p. 19. So what is the real number?

### **ERRORS under 3.0 Description of Affected Environment**

ERRORS: p. 20-23 There are no description of St. Augustine County or Walker County, parcels -015 and -016. This is an area that deals with the Sabine National Forest and Lake Conroe respectively.

ERRORS: p. 20-23 There are no descriptions re: Parcels -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030 -031, -032. These are all pertinent to Davy Crockett National Forest. Though Trinity and Houston Counties have a paragraph, there is no Mention of this forest in either.

ERROR: p. 22 under Houston County, Texas (Parcel - 036)  
A sentence states "Water makes up 28,160 acres of water, most of which is in Lake Texoma. Lake Texoma is in far north Texas – almost 265 miles away or 4 hours drive time. **Lake Texoma bears NO relationship to Houston County whatsoever.**

ERROR: p. 22 under Live Oak County, Texas (Parcel -013, -014, and -036) Once again a sentence states "Water makes up 28,160 acres of water, most of which is in Lake Texoma." It would take one 6 hr. 49 min. to drive from Lake Texoma all the way to Choke Canyon Reservoir in far South Texas or almost 444 miles. **Lake Texoma bears NO relationship to Houston County whatsoever.** Again, what is the relevance?

### **ERRORS under 3.3.1 Surface Water**

ERROR: p. 31 Last Paragraph: "In Denton and Burleson Counties, Texas, portions of the proposed lease parcels (0-38, -039, -040, -041, -042, -043, -044 are underneath Lake Lewisville." **Only parcels -41 and -42 are in Burleson counties – and they are affiliated with Somerville Lake, not Lewisville Lake. Parcels -038, -039, and -040 and -043 are in Washington County. So the next sentence that indicates 041 is in Washington County, is incorrect.** It is Burleson county according to p. 17.

ERROR: p. 33 **NONE of the Texas aquifers - either major or minor that relate to any of the Texas parcels up for sale are discussed here regarding groundwater.** Yet the only mention is to the unrelated Ogallala aquifer located in the West Texas panhandle. I would call that "error by omission" in relation to where Texas gets most of its groundwater.

**ERRORS under 3.6 Invasive, Non-Invasive Species**

ERROR: p. 37 under subject of "Texas:" BLM states it "has identified 157 species in Grayson County" and "Sixteen additional species on the Federal Noxious Weeds list have distributions in Texas; however, EDDMS does not identify them as occurring in Grayson County." **None of these parcels are in Grayson County, so why is this discussed?**

**ERRORS in Appendix 2. Nominated Lease Sale Parcels (maps)**

ERROR: p. 95 The Trinity County map indicates that parcels "017-028" are included on this map. **There are no indications of parcels #25, #26, #27, or #28 on this map** – where are they located? How is anyone to reference this?

ERROR: p. 100 **The map is identified as "Burleson County" for parcel #043. Page 17 lists parcel #043 as being in "Washington County."** Which is correct on these contradictory statements?

**Maps are totally missing for 3 parcels:**

- 015 (Sabine National Forest in St. Augustine Co., TX see p. 12)
- 016 (Sam Houston National Forest in Walker Co., TX see p. 12)
- 025 (Davy Crockett National Forest in Trinity Co., TX see p. 14)
- 026 (Davy Crockett National Forest in Trinity Co., TX see p. 14)
- 027 (Davy Crockett National Forest in Trinity Co., TX see p. 14)
- 028 (Davy Crockett National Forest in Trinity Co., TX see p. 14)

**Conclusion**

***The Environmental Assessment for this April 2016 sale of parcels, at least for Texas, is inadequate. The Texas references alone are riddled with errors. The document omits maps, presents erroneous information, or lacks important information for the most cursory Environmental Assessment.***

***These Texas water supplies and other valuable assets including important forestlands are too important to be treated with little to no information pertinent to their localities or characteristics. The April sale should be cancelled. At the very least, a new and accurate Environmental Assessment should be developed but in light of the major water supplies affected, an Environmental Impact Statement is warranted.***