RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

PROPOSAL FOR DECISION

OIL AND GAS DOCKET NO. 02-0296911

THE APPLICATION OF EAGLE FORD WATER AND DISPOSAL, LLC PURSUANT TO STATEWIDE RULE 9 FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, HWY 95 SWD A LEASE, WELL NO. 1, EAGLEVILLE (EAGLE FORD-2) FIELD, LAVACA COUNTY, TEXAS

OIL AND GAS DOCKET NO. 02-0296912

THE APPLICATION OF EAGLE FORD WATER AND DISPOSAL, LLC PURSUANT TO STATEWIDE RULE 9 FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, HWY 95 SWD LEASE, WELL NO. 1, EAGLEVILLE (EAGLE FORD-2) FIELD, LAVACA COUNTY, TEXAS

HEARD BY: Paul Dubois – Technical Examiner
Terry Johnson – Hearings Examiner

REVIEWED BY: Marshall Enquist – Administrative Law Judge

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Stephen Fenoglio Kerry Pollard, P. E. Clayton Reaser Krystal Eversdyk	Eagle Ford Water & Disposal, LLC
PROTESTANTS:	
Amber Nieto	Irene & Steve Nieto, Minnie Lee Fisbeck
Daniel Arguilo	Pro Se

PROCEDURAL HISTORY

Application Filed:	April 17, 2015
Protest Received:	April 22, 2015
Request for Hearing:	May 21, 2015
Notice of Hearing:	August 27, 2015
Date of Hearing:	September 29, 2015
Transcript Received:	October 19, 2015
Proposal For Decision Issued:	December 29, 2015

STATEMENT OF THE CASE

Eagle Ford Water & Disposal, LLC (EFWD) seeks commercial authority to dispose of oil and gas waste by injection pursuant to Statewide Rule 9 (16 Tex. Admin. Code §3.9) for the following wells:

- Hwy 95 SWD A Lease, Well No. 1, Eagleville (Eagle Ford-2) Field, Lavaca County, Texas (hereinafter, "Well No. A1") will inject into the Wilcox Formation; and

- Hwy 95 SWD Lease, Well No. 1, Eagleville (Eagle Ford-2) Field, Lavaca County, Texas (hereinafter, "Well No. 1") will inject into the Edwards and Glen Rose Formations.

Both wells will be newly-drilled and assigned to the Eagleville (Eagle Ford-2) Field. The wells will be located on an 11.7-acre tract of land located about 2 miles northeast of Moulton, Texas.

Notice requirement service lists for the two wells are identical. Notices for both applications were published on April 8, 2015, in the *Hallettsville Tribune-Herald*, a newspaper of general circulation in Lavaca County. On April 14, 2015, notices for both applications were mailed to the Lavaca County Clerk, the surface owner of the 11.7-acre tract, the owner of all adjoining surface tracts, and all operators of wells within a one-half mile radius of the proposed disposal wells' surface locations.

The applications are protested by surface owners of adjoining tracts. At the hearing, Amber Nieto was present to represent Irene Nieto, Steve Nieto and Minnie Lee Fisbeck. Daniel Arguilo, who also owns an adjoining tract, represented himself in protest.

The Examiners conclude EFWD has met its burden of proof pursuant to Statewide Rule 9 and Chapter 27 of the Texas Water Code. The Examiners recommend both applications be approved and permits issued for Well No. A1 and Well No. 1 (Subject Wells).

APPLICABLE LAW

The Railroad Commission may grant an application for a disposal well permit under Texas Water Code § 27.051(b) and may issue a permit if it finds:

1. The use or installation of the injection well is in the public interest;

2. The use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation;

3. With proper safeguards, both ground and surface fresh water can be adequately protected from pollution; and

4. The applicant has made a satisfactory showing of financial responsibility as required by Section 27.073.

DISCUSSION OF EVIDENCE

APPLICANT'S EVIDENCE

The Subject Wells will be located on an 11.70 acre tract of land on the east side of State Highway 95, about two miles northeast of Moulton in Lavaca County, Texas. The wells will inject produced salt water and non-hazardous oilfield waste exempt from the Resource Conservation and Recovery Act (RCRA). Kerry Pollard, P. E., EFWD's expert engineering witness, testified that the two wells will be drilled, completed and operated as follows:

Well No. A1 - Wilcox Formation Injection Interval

- Drilled to a depth of 7,700 feet to the base of the Wilcox Formation.
- Surface casing (9 5/8-inch) set to a depth of 2,800 feet with cement circulated to the surface.
- Long-string casing (7-inch) set to a depth of 7,700 feet with cement circulated to a depth of 4,800 feet.
- Injection tubing (4 ½-inch) set with a packer at a depth of 5,400 feet.
- Perforated injection interval from 5,500 feet to 7,700 feet.
- Maximum daily injection volume of 25,000 barrels and an estimated daily injection volume of 15,000 barrels.

- Maximum surface injection pressure of 2,550 pounds per square inch (psi) and an estimated average surface injection pressure of 1,200 psi.

The lower Wilcox Formation consists of sand intervals with up to 20 percent porosity and permeability in the range of about one Darcy. The top of the lower Wilcox Formation is marked by a correlative limestone stratum which is overlain by a shale formation. These strata will confine the injected fluids to the disposal zone, preventing injected fluids from migrating upwards into the overlying fresh water zones. The top of the lower Wilcox Formation is anticipated to occur at a depth of about 5,000 feet. EFWD is requesting the top of the disposal interval to be 500 feet lower, at a depth of 5,500 feet. The lower Wilcox Formation is underlain by the Midway Shale Formation, a thick impermeable stratum that will prevent injected fluids from migrating to deeper horizons.

Well No. 1 - Edwards and Glen Rose Formations Injection Interval

- Drilled to a depth of 13,300 feet to the base of the Glen Rose Formation.
- Surface casing (9 5/8-inch) set to a depth of 2,800 feet with cement circulated to the surface.
- Long-string casing (7-inch) set to a depth of 13,300 feet with cement circulated to a depth of 10,700 feet.
- Injection tubing (4 ½-inch) set with a packer at a depth of 11,200 feet.
- Perforated injection interval from 11,300 feet to 13,300 feet.
- Maximum daily injection volume of 25,000 barrels and an estimated daily injection volume of 15,000 barrels.
- Maximum surface injection pressure of 5,650 pounds psi and an estimated average surface injection pressure of 1,400 psi.

The Edwards and Glen Rose Formations consist of limestone sequences with intervals of porosity development suitable for injection. The Edwards Formation is overlain by the Georgetown Formation, which has many dense layers. The Georgetown Formation, in turn, is overlain by the Del Rio shale. The Georgetown and Del Rio formations will confine the injected fluids to the disposal zone. The Buda Formation is present between the Del Rio and Eagle Ford Formations. The Pearsall Formation underlies the base of the Glen Rose Formation and is a 200 to 500-foot thick shale formation.

Groundwater and Geology

The Commission's Groundwater Advisory Unit (GAU) reports that the base of usable quality water (BUQW) at the location of the Subject Wells is at a depth of 2,800 feet. Moreover, the interval from the land surface to a depth of 800 feet contains water of superior quality that must be isolated from water in underlying beds. The base of the underground sources of drinking water (USDW) is located at a depth of 4,000 feet, and geologic confinement occurs at a depth of 5,500 feet.

The GAU issued "no-harm" letters for the Subject Wells on March 26, 2015. Those letters state, "Our review of the data contained in the application and of other available geologic data indicates that drilling and using this disposal well and injecting oil and gas waste into the subsurface stratum will not endanger the freshwater strata in the area."

EFWD identified 108 records of water wells within a 2-mile radius of the Subject Wells. The deepest reported water production was from a depth of about 1,000 feet in four wells. Most of the wells, by far, produced from depths of less than 600 feet.

There is no oil, gas or geothermal production from the Wilcox, Edwards or Glen Rose Formations in the vicinity of the Subject Wells. Hydrocarbons are produced from the Eagle Ford Formation in the immediate area. The Eagle Ford Formation is encountered at a depth of about 10,500 feet below ground surface. The Eagle Ford Formation is isolated from the disposal interval by the Georgetown, Del Rio and Buda Formations.

Artificial Penetrations

There are no wellbores or other artificial penetrations into the disposal intervals within a one-quarter mile radius of the Subject Wells. Several horizontal drainhole wells have been permitted in the Eagle Ford Formation within a one-half mile radius of the Subject Wells. The Eagle Ford Formation occurs at a depth of about 10,500 feet. However, the surface locations and vertical portions of wellbores for these wells are not located within the one-half mile radius, with one exception. About one-half mile northeast of the proposed well is the surface location of the Devon Energy Production Co., L. P. Roosevelt Unit Well No. 1H. The horizontal wellbore runs southeast, tangentially to the one-half mile radius circle. The Devon well contains three steel casing strings, two of which are cemented across the BUQW. Therefore, freshwater will be protected from potential pollution at the Devon well.

Surface Facility

The Subject Wells will share a surface facility. The facility will have four unloading bays on a closed system; waste fluids will not be exposed to the atmosphere. Tankage and mechanical equipment will be located within a secondary containment structure designed to hold 110 percent of the combined tank capacity and precipitation from a 24-hour/25-year storm event. The impermeable secondary containment structure will be

constructed of concrete or a synthetic liner. EFWD will develop a spill prevention, control and countermeasures (SPCC) plan for use during facility operations. In addition, the facility will obtain an air quality permit from the Texas Commission on Environmental Quality (TCEQ).

Operator Financial Assurance

EFWD operates several other commercial disposal wells in Texas. EFWD stated that since its inception in 2011, the company has never been cited for a violation by the Railroad Commission, the U.S. Environmental Protection Agency, or any other regulatory agency. EFWD anticipates the Subject Wells and surface facilities will cost about $4 million to build. EFWD has filed a $25,000 cash bond with the Commission for financial assurance.

Nearby Disposal Capacity

Although the rate of drilling permits and completions has declined, drilling activity continues in the Eagle Ford Play in the area. In 2014 there were 335 drilling permits issued and 203 well completions filed for wells within a 15-mile radius of the Subject Wells. Through 2015, those numbers have fallen to 52 and 88, respectively. EFWD identified five disposal well facilities located within a 15-mile radius of the Subject Wells. Clayton Reaser, President of EFWD, testified that three of those nearby wells are capacity limited based on either pressure or mechanical constraints. The other two wells are private disposal wells not available to the general public. Mr. Reaser testified that "there is absolutely a need" for the Subject Wells.[1] EFWD offered into evidence three letters from local waste haulers and operating companies supporting the need for the Subject Wells.

In addition, the Moulton SWD Well No. 1, located about one mile north of the Subject Wells, was permitted by Red Wolf Oil Company on February 11, 2015. The Moulton SWD was subsequently acquired by High Roller Wells, LLC. That well is permitted to inject 20,000 barrels of oil and gas waste into the lower Wilcox Formation in the depth interval from 5,100 feet to 6,500 feet. Ms. Nieto noted that there has been significant activity at the Moulton SWD Well No. 1 location; tanks have been installed and trucks are regularly coming and going. Mr. Pollard stated that the Moulton well is not indicated as being "active" on Commission records, which were the basis for his analysis of "public interest".

Nearby Seismic Activity

Online records of the U.S. Geological Survey did not identify any seismic events within a 6-mile radius of the Subject Wells, encompassing an area of 113 square miles.

---

[1] Tr. 33: 24-25.

PROTESTANT'S EVIDENCE

Irene and Steve Nieto are adjoining surface owners of a tract northwest of the Subject Wells, and Minnie Lee Fisbeck owns the tract northwest of the Subject Wells. Amber Nieto offered a statement of opposition on their behalf, but agreed that her statement would not be evidentiary testimony subject to cross examination. Ms. Nieto stated her concern that the Subject Wells are in close proximity to another disposal well about a half mile away that is already in operation.[2] In addition, she identified one other well about six miles away, and several more within about 10 miles of the Subject Wells. She believes that there is not currently a need for the two Subject Wells at the proposed location due to the recent decline in oil and gas activity. She also expressed concern over how the proposed wells may affect the Nieto's and Fisbeck's property values.

Daniel Arguilo is a surface owner of an adjoining tract south of the Subject Wells. Mr. Arguilo also gave a statement for the record and agreed that his statement would not be evidentiary testimony subject to cross examination. Mr. Arguilo's primary concern was the deterioration of the area's bucolic rural atmosphere–not just as it is threatened by the Subject Wells, but as it has already been negatively affected by oil and gas activity over the last few years. Mr. Arguilo does not dispute the need for additional disposal capacity, but he feels that the two permits being considered in this matter would result in an unnecessary clustering of disposal wells in the specific area and that such a clustering is not in the public interest, especially with regard to traffic safety on Hwy. 95. Mr. Arguilo stated that he has leased the mineral rights on his property to Devon, and he stated that he holds surface rights at a nearby disposal well facility.

EXAMINERS' ANALYSIS OF THE EVIDENCE

The evidence in the record demonstrates EFWD has met its burden of proof and that the Subject Well applications meet the requirements of Chapter 27 of the Texas Water Code and Statewide Rule 9. The Protestants offered statements in opposition to the applications, but agreed that their statements were not considered to be evidence. As a result, the Examiners recommend the subject disposal well applications be approved and the permits issued. The required elements of the Texas Water Code § 27.051(b) will be taken in turn.

Public Interest

Although the pace of the activity has declined over the last year, EFWD demonstrated that oil and gas activity continues in the area. There are five active disposal well facilities located within a 15-mile radius of Subject Wells, and a sixth well appears to

---

[2] A reference to the Moulton SWD Well No. 1, about one mile north of the Subject Wells and discussed above.

have recently become active. Clayton Reaser, President of EFWD, testified that three nearby disposal wells are at capacity based on either pressure or mechanical constraints. Two of the other wells are private disposal wells not available to the general public. Mr. Reaser testified that "there is absolutely a need" for the Subject Wells. EFWD offered unrefuted evidence from local waste haulers and operating companies supporting the applications. The evidence in the record indicates the Subject Wells are in the public interest pursuant to Texas Water Code § 27.051(b)(1).

Protect Oil, Gas and Mineral Resources

There is no oil, gas or geothermal production from the Wilcox, Edwards or Glen Rose Formations in the vicinity of the Subject Wells. Hydrocarbons are produced from the Eagle Ford Formation in the immediate area. The Eagle Ford Formation is encountered at a depth of about 10,500 feet below ground surface. The Eagle Ford Formation is isolated from the disposal interval by the Georgetown, Del Rio and Buda Formations. There are no wellbores or other artificial penetrations into the disposal intervals within a one-quarter mile radius of the Subject Wells. Several horizontal drainhole wells have been permitted in the Eagle Ford Formation within a one-half mile radius of the proposed wells. The nearest surface location of an Eagle Ford well is one-half mile northeast of the Subject Wells, the Devon Energy Production Co., L. P. Roosevelt Unit Well No. 1H. The horizontal wellbore runs southeast, tangentially to the one-half mile radius circle. The Devon well contains three steel casing strings, two of which are cemented across the BUQW. The evidence in the record demonstrates the proposed disposal well will not endanger or injure any oil, gas, or other mineral formation pursuant to Texas Water Code § 27.051(b)(2).

Prevent Pollution of Ground and Surface Fresh Water

The BUQW at the Subject Wells' locations is at a depth of 2,800 feet. Moreover, the interval from the land surface to a depth of 800 feet contains water of superior quality that must be isolated from water in underlying beds. The base of the underground sources of drinking water (USDW) is located at a depth of 4,000 feet, and geologic confinement occurs at a depth of 5,500 feet.

The two wells will be constructed with surface casing that is set to the BUQW and cemented to the surface. The GAU issued "no-harm" letters for both wells stating that injection activities will not endanger the freshwater strata in the area. In addition, the deepest reported water production within a two mile radius was from a depth of about 1,000 feet, but most wells in the area produce from depths of less than 600 feet.

The shared surface facility will be built with a closed system. The storage tanks and mechanical equipment will be located within a secondary containment structure designed to hold 110 percent of the combined tank capacity and precipitation from a 24-hour/25-year storm event. The impermeable secondary containment structure will be constructed of

concrete or a synthetic liner. EFWD will develop a spill prevention, control and countermeasures (SPCC) plan for use during facility operations.

The evidence in the record demonstrates that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution pursuant to Texas Water Code § 27.051(b)(3).

Demonstrate Financial Responsibility

EFWD (Operator No. 238325) holds a current and valid Form P-5 Organization Report. EFWD has filed a $25,000 cash bond with the Commission for financial assurance. The evidence in the record demonstrates the applicant has made a satisfactory showing of financial responsibility as required by Texas Water Code § 27.073 pursuant to Texas Water Code § 27.051(b)(4).

FINDINGS OF FACT

1. Eagle Ford Water & Disposal, LLC seeks authority pursuant to 16 Tex. Admin. Code § 3.9 ("Statewide Rule 9") to dispose of oil and gas waste by injection into formations not productive of oil or gas using the Subject Wells:

   a. Hwy 95 SWD A Lease, Well No. 1, Eagleville (Eagle Ford-2) Field, Lavaca County, Texas will inject into the Wilcox Formation; and

   b. Hwy 95 SWD Lease, Well No. 1, Eagleville (Eagle Ford-2) Field, Lavaca County, Texas will inject into the Edwards and Glen Rose Formations.

2. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of hearing.

   a. Notice requirement service lists for the two wells are identical.

   b. Notices for both applications were published on April 8, 2015, in the *Hallettsville Tribune-Herald*, a newspaper of general circulation in Lavaca County.

   c. On April 14, 2015, notices for both applications were mailed to the Lavaca County Clerk, the owner of the surface tract, the owner of all adjoining surface tracts, and all operators of wells within a one-half mile radius of the Subject Wells.

3. The applications are protested by surface owners of adjoining tracts: Irene Nieto, Steve Nieto, Minnie Lee Fisbeck and Daniel Arguilo ("Protestants").

The Protestants gave statements in opposition to the two permit applications, but agreed that their statements were not to be considered testimony.

4. The use or installation of the injection well is in the public interest.

   a. The wells will be located on one 11.7 acre tract of land located about 2 miles northeast of Moulton, Lavaca County, Texas.

   b. Oil and gas activity continues in the area.

   c. There are five active disposal well facilities located within a 15-mile radius of Subject Wells, and a sixth well appears to have recently become active.

   d. Three nearby disposal wells are at capacity based on either pressure or mechanical constraints. Two of the other wells are private disposal wells not available to the general public.

   e. Several local waste haulers and operating companies supporting the applications.

5. With proper safeguards, both ground and surface fresh water can be adequately protected from pollution.

   a. The base of usable quality water at the location of the proposed wells is at a depth of 2,800 feet.

   b. Within a two-mile radius of the Subject Wells, the deepest reported water production is from a depth of about 1,000 feet. Most wells in the area produce from depths of less than 600 feet.

   c. The two wells will be constructed with surface casing that is set to a depth of 2,800 feet and cemented to the surface.

   d. The storage tanks and mechanical equipment will be located within a secondary containment structure designed to hold 110 percent of the combined tank capacity and precipitation from a 24-hour/25-year storm event. The impermeable secondary containment structure will be constructed of concrete or a synthetic liner.

6. The use or installation of the Subject Wells will not endanger or injure any oil, gas, or other mineral formation.

a. There is no oil, gas or geothermal production from the Wilcox, Edwards or Glen Rose Formation disposal intervals in the vicinity of the Subject Wells.

b. Hydrocarbons are produced from the Eagle Ford Formation in the immediate area at a depth of about 10,500 feet below ground surface.

c. The Eagle Ford Formation is isolated from the disposal interval by the Georgetown, Del Rio and Buda Formations.

d. There are no wellbores or other artificial penetrations into the disposal interval within a one-quarter mile radius of the Subject Wells.

7. The applicant has made a satisfactory showing of financial responsibility.

a. Eagle Ford Water & Disposal, LLC (Operator No. 238325) holds a current and valid Form P-5 Organization Report.

b. EFWD has filed a $25,000 cash bond with the Commission for financial assurance.

CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051.

2. All notice requirements have been satisfied. 16 Tex. Admin. Code § 3.9.

3. The use or installation of the injection wells is in the public interest. Texas Water Code § 27.051(b)(1).

4. The use or installation of the injection wells will not endanger or injure any oil, gas, or other mineral formation. Texas Water Code § 27.051(b)(2).

5. With proper safeguards, both ground and surface fresh water can be adequately protected from pollution. Texas Water Code § 27.051(b)(3).

6. The applicant has made a satisfactory showing of financial responsibility. Texas Water Code § 27.051(b)(4).

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend the Commission enter an order granting the application of Eagle Ford Water

and Disposal, LLC commercial authority to dispose of oil and gas waste by injection pursuant to Statewide Rule 9 (16 Tex. Admin. Code §3.9) for the Hwy 95 SWD A Lease, Well No. 1 and the Hwy 95 SWD Lease, Well No. 1.

Respectfully submitted,

Paul Dubois
Technical Examiner

Marshall Enquist
Administrative Law Judge