

Update from Coastal Protection and Restoration Authority (CPRA)

2

Projects submitted by CPRA Board to Gulf Coast Ecosystem Restoration Council for consideration under the Council-Selected Restoration Component of the RESTORE Act

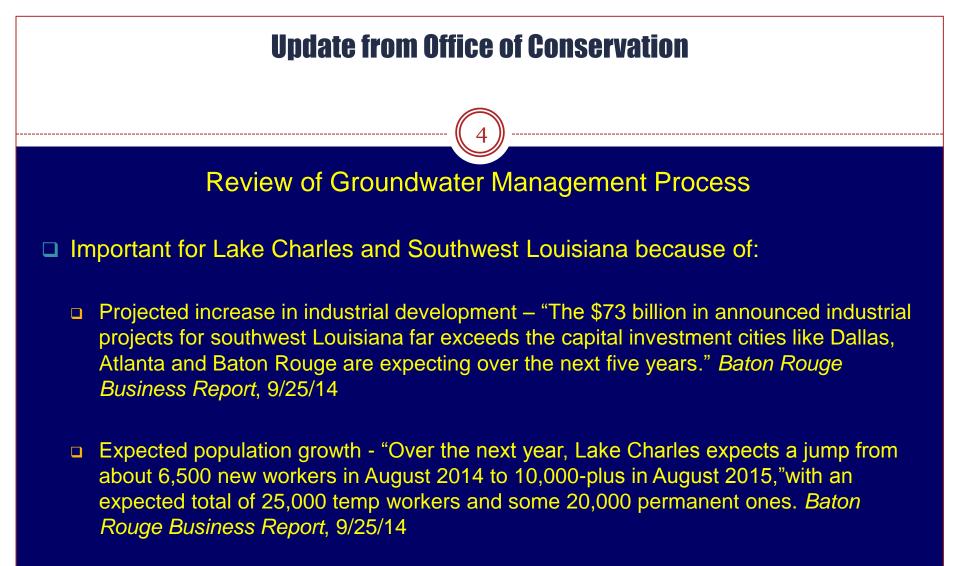
- Golden Triangle March Creation Project
- Mississippi River Reintroduction into Maurepas Swamp Project
- Biloxi Marsh Living Shoreline Project
- West Grand Terre Beach Nourishment and Stabilization Project
- Lower Mississippi River Management Program
- Fact sheets and Project Proposals available at: <u>http://coastal.la.gov/oil-spill-content/oil-spill-overview/restore-act/</u>

Update from Dept. of Agriculture & Forestry

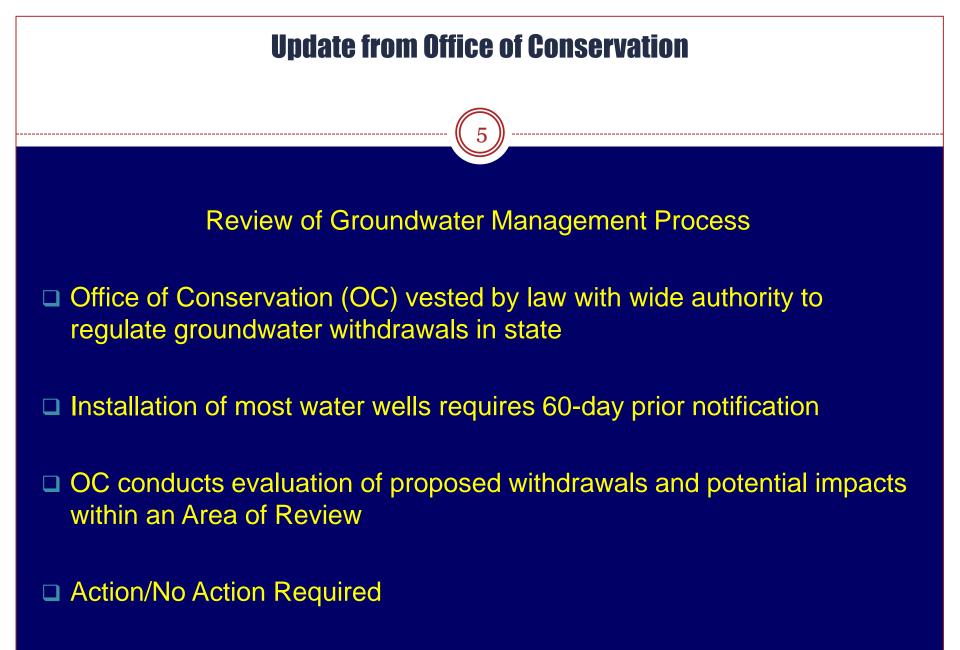
3

Southeast Arkansas/Northeast Louisiana Boeuf-Tensas Feasibility Study

- Study for a project to introduce Arkansas River water into Bayou Bartholomew and Deep Bayou for ecosystem restoration and agricultural water supply
- Conducted by Vicksburg Dist. US Army Corps of Engineers and Arkansas Boeuf-Tensas Regional Water Distribution Dist.
- La. Soil and Water Conservation Districts in the region are contributing \$150,000 to the study through a newly formed Northeast La. Surface Water Mgmt. Committee
- Recent concerns over stream degradation, drought, and saltwater intrusion into local aquifers, all of which threaten important sources of irrigation supply
- Northeast La. annually has over 1.5 million acres in crops that produce an annual gross farm value of nearly <u>\$1.5 billion dollars</u>



OC already fielding calls regarding water sourcing in the area

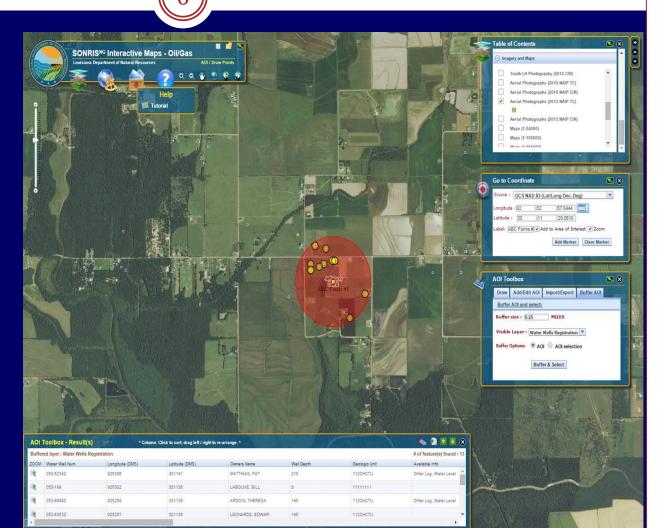


Evaluation of Withdrawals –Use of DNR SONRIS/GIS (Ex. ABC Farms #1, Jeff Davis Parish)

Evaluation Criteria

- Adverse impact on neighboring wells
- Water quality, including known environmental contamination
- Saltwater encroachment

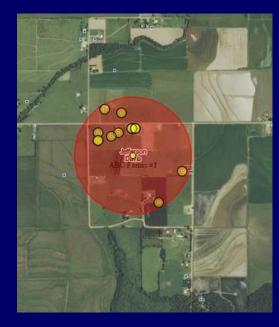
Known water level decline and/or subsidence



Evaluation of Withdrawals – Registered Wells in Area of Review (Ex. ABC Farms #1, Jeff Davis Parish)

Area of Review

In this example, 1/4 mile buffer around proposed irrigation well



Water Wells By LATITUDE / LONGITUDE Report

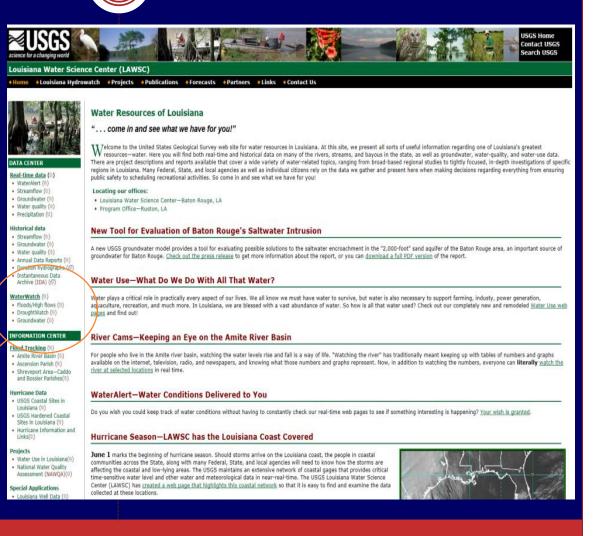
Latitude	Longitude	Radius Ft	MSG							
30.191388889	-92.882777778		Found 10 records							
Well Distance Ft	SECTION	TOWNSHIP	RANGE	PARISH_NAME	PARISH_NUM	LOCAL_WELL_NUM	WELL_USE	DESCRIPTION	WELL_STATUS	OWNERS_NUM
700.2	009	105	05W	JEFFERSON DAVIS	053	189	I	Irrigation	Active	2
706.91	009	105	05W	JEFFERSON DAVIS	053	6699Z	н	Domestic	Active	
706.91	009	105	05W	JEFFERSON DAVIS	053	6698Z	н	Domestic	Plugged and Abandoned	
712.33	010	105	05W	JEFFERSON DAVIS	053	6353Z	н	Domestic	Plugged and Abandoned	
712.33	010	105	05W	JEFFERSON DAVIS	053	6354Z	н	Domestic	Plugged and Abandoned	
729.4	009	105	05W	JEFFERSON DAVIS	053	188	1	Irrigation	Active	1
965.81	009	105	05W	JEFFERSON DAVIS	053	301	1	Irrigation	Active	
965.81	009	105	05W	JEFFERSON DAVIS	053	6435Z	н	Domestic	Plugged and Abandoned	
1066.19	009	105	05W	JEFFERSON DAVIS	053	806	1	Irrigation	Active	
1141.61	009	105	05W	JEFFERSON	053	76	I.	Irrigation	Active	
OWNERS_NAME	DRILLERS_NAM	E WELL_DEF	TH CAS	ING_DIAMETER	DATE_COMPLE	TED WATER_LEVEL	DATE_MEASU	IRED GEOLOGI		DE LONGITUDE
LABOUVE, BILL	UNKNOW/N	0	15			0.00		1111111	301135	925302
ARDOIN, THERESA	MAXIM'S	145	3		05/98	60.00	05/04/98	112CHCT	J 301136	925258
ARDOIN, THERESA	UNKNO\/N	145	2			0.00		112CHCT	J 301136	925258
LEONARDS, EDWAR	UNKNOWN	145	2			0.00		112CHCT	J 301136	925257
LEONARDS, EDWAR	MAXIM'S	145	2		06/94	62.00	06/24/94	112CHCT	J 301136	925257
LABOUVE, BILL	UNKNOWN	0	15			0.00		11111111	301134	925304
ARDOIN, ROBERT	MAXIM'S	165	2		10/93	60.00	10/04/93	112CHCT	J 301133	925308
ARDOIN, ROBERT	UNKNOWN	30	8			0.00		112CHCT	301133	925308
LABOUVE, BILL	MAXIM'S	145	4		04/91	61.00	04/08/91	112CHCT	J 301135	925308
HARDY ESTATE	UNKNOWN	0				16.83	01/16/39	112CHCT	J 301140	925301

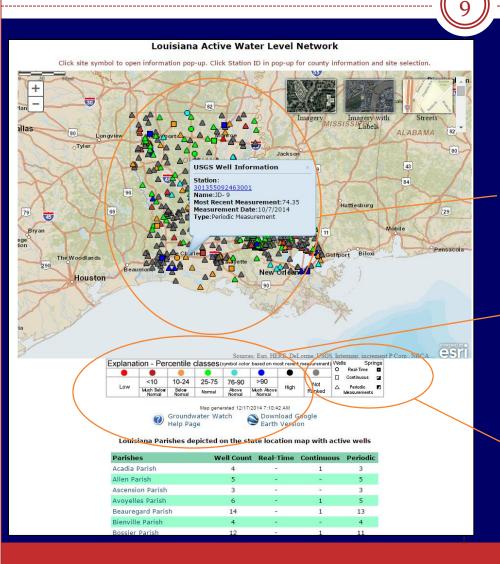
Evaluation of Withdrawals – Utilization of DNR/USGS Expanded Statewide Monitoring Network

http://la.water.usgs.gov/

- Value Added by Network:
 - Up-to-date information
 - Greater well density (532 total across state)
 - More comprehensive statewide coverage
 - New potentiometric maps

Go to WaterWatch Tab, Click "Groundwater"





http://groundwaterwatch.usgs .gov/statemap.asp?sc=22&sa =LA

Many wells not yet rated (dark gray) – not enough comparative data points

Color key provides relative water level (compared to previous readings) – Low to High

Symbol key provides measurement schedule (quarterly, continuous, etc.)

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Network wells depicted on the Jefferson Davis Parish, LA location map

Map Index	Site ID	ite ID Site Name		Date	Well Depth	Local Aquifer	
▲ 1	300236092543501	JD- 222	38.72 BLS	10/9/2014	300	Chicot Aquifer, Upper	
02	301300092584503	JD- 485A	60.77 BLS	12/16/2014	290	Chicot Aquifer, Upper	
Δ3	301355092463001	JD- 9	74.35 BLS	10/7/2014	318	Chicot Aquifer, Upper	
▲ 4	301356092462701	JD- 773	69.23 BLS	10/7/2014	666.	Chicot Aquifer, Lower	
▲ 5	302852092415001	JD- 406	86.84 BLS	10/7/2014	450	Chicot Aquifer, Undifferentiated	

http://groundwaterwatch.us gs.gov/countymap.asp?sa= LA&cc=053

Individual Parish Page – Jeff Davis Parish, showing all local monitor wells within USGS network





DESCRIPTION

Site Number: 301355092463001

Latitude 30°13'55", Longitude 92°46'30" NAD83 Jefferson Davis Parish, Louisiana, Hydrologic Unit 08080202 Well depth: 318 feet Land surface altitude: 24.10feet above NGVD29. Well completed in "Coastal lowlands aquifer system" (S100CSLLWD) national aquifer. Well completed in "Chicot Aquifer, Upper" (112CHCTU) local

aquifer

AVAILABLE DATA:

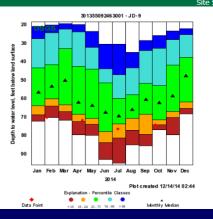
Data Type	Begin Date	End Date	Count
ield groundwater-level leasurements	1938-06- 24	2014-10- 07	889
Additional Data Sources	Begin Date	End Date	Count
Groundwater Watch **offsite**	1938	2014	889
Annual Water-Data Report (pdf) **offsite**	2006	2010	5
PERATION: Record for this site is maintained Water Science Center Email questions about this site t			

Center Water-Data Inquiries

http://groundwaterwatch.usgs.g ov/AWLSites.asp?S=30135509 2463001&ncd=

Individual well history page, showing measurements and records

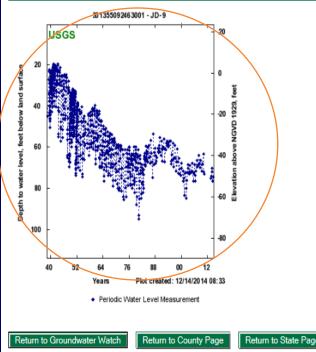
Groundwater Watch Help Page



CS								
Most recent data value: 74.35 on 10/7/2014 Period of Record Monthly Statistics for 301355092463001 Depth to water level, feet below land surface All <u>Approved</u> Continuous & Periodic Data Used In Analysis Note: Highlighted values in the table indicate closest statistic to the most recent data value.								
Month	Lowest Median	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest ^P Median	Number of Years
Jan	72.43	68.85	63.96	56.84	43.42	27.77	20.91	53
Feb	70.38	64.08	60.22	53.59	41.81	24.43	20.28	49
Mar	71.72	67.09	63.36	50.38	33.10	22.51	19.52	46
Apr	79.62	72.51	68.65	62.11	42.76	24.05	19.99	53
May	80.03	74.06	70.73	64.01	44.18	32.38	23.67	48
Jun	93.00	83.9	77.88	67.53	51.61	44.02	30.60	42
Jul	95.00	81.49	73.81	69.52	59.95	47.19	30.58	57
Aug	85.15	77.18	70.81	66.22	57.97	43.37	34.95	45
Sep	85.59	79.46	68.50	60.67	51.91	34.03	28.55	40
Oct	77.10	74.39	71.60	62.39	52.95	32.90	25.97	58
Nov	79.81	70.25	67.17	58.80	41.89	28.02	23.43	42
Dec	68.35	65.41	61.94	47.90		25.42	22.10	39
100	Statiati	cs Optio		2/13/2014	12:33-2			
	Statisti	us Opuc	nis –					
đ	View month/year statistics							

Individual well history page, showing measurements and records (contd.)

Showing 70 plus year water level trend [–] (an exceptionally robust record)



Periodic Groundwater Data

Summary for Period of Record Periodic Water Levels							
Depth to water level, feet below land surface							
Approved Periodic Water Level Values							
Begin Date End Date Number of Valu							
06/24/	38 10/0	7/14	889				
Highest WL	Date of Highest WL	Lowest WL	Date of Lowest WL				
19.52	03/29/43	95	07/21/80				

Groundwater Levels Options

Stew latest data on NWISWeb

Download Groundwater levels in text format

^{*}References to non-Department of the Interior (DOI) products do not constitute an endorsement by the DOI.

Evaluation of Withdrawals – Utilization of USGS Parish and Aquifer/Basin Water Use



http://la.water.usgs.gov/WaterUse/default.asp

U.S. Geological Survey Water Resources Cooperative Program



Chart Data

2012 Data By:

NEW

Parish

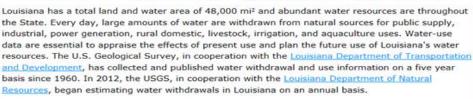
Aquifer

Basin

Total

Louisiana Water Use Program





Note:

Values in the tables represent the best estimate of what was known at the time of data collection. As additional information becomes available, some revisions may be made in order to correct errors and reflect an improved understanding of withdrawals. Therefore, the present dataset viewed in the tables is evolving rather than permanently fixed. Modified on 09/27/2013.

Water Use Publications



Questions? Contact:

psargent@usgs.gov

Pierre Sargent

Select a Year 💌 🛛 Go

Cool Tools

USGS Water Alert US Water Monitor Drip Calculator La River Cams USGS WaterWatch

Links

National Water Use Program Publications Glossary USGS

Partners

La DOTD: Public Works and Water Resources Division

La Department of Natural Resources

Eva	Evaluation of Withdrawals – USGS Parish and Aquifer/Basin Water Use (Ex. Chicot Aquifer/Jeff Davis Parish)									
			14							
	Lo	uisiana Water Use—2012					ue Ac		1- 1-	
Home	Select an Aquifer	Go						ate trend		
	2012 2013 20	14						nd parisl	h water	
Data By: Parish	2012 Aquifer Withdrawals Chicot Aquifer System	By Parish				ι	ISE			
Aquifer	Parish	Withdrawals in Mgal/day								
Addiner	Acadia	225.10			Louisia	na Water Use	-2012			
Basin	Allen	23.86				na water ose	2012			
Total	Beauregard	15.11	Home		Go	_				
	Calcasieu	81.27		Use Type A	quifer Basi	n				
	Cameron	6.02	Data By:	Water Usage Tr	o Dy Davich					
	Evangeline	67.17	Parish	Water Usage Typ	e by Parish					
	Iberia	16.14		2012 201	13 2014					
	Jefferson Davis	146.26	Aquifer						-	
	Lafayette	39.32	Basin	2012 Groundwat	er and Surface \	Water Withdraw	als			
	Rapides	1.56	Total	Jefferson Day	ris Parish					
	St Landry	40.91		Groundwater	Public Supply	Industrial	Power Generation	General Irrigation		
	St Martin	3.99		(Mgal per day)	3.74	0.15	0.00	1.27		
	St Mary	2.67		Total Groundwater 146.26	Rice Irrigation	Rural Domestic 0.39	Livestock 0.17	Aquaculture 16.83		
	St Tammany	0.02								
	Vermilion	43.28		Surface Water	Public Supply	Industrial	Power Generation	General Irrigation		
	Vernon	0.52		(Mgal per day)	0.00	0.00	0.00	0.85		
				Total Surface Water 36.77	Rice Irrigation 10.68	Rural Domestic 0.00	Livestock 0.00	Aquaculture 25.24		

Action/No Action by Office of Conservation on Withdrawals (Ex. "No Action" Letter, Calcasieu Parish)

(15)

No action necessary

- Restrict/limit withdrawals
- Require spacing safeguards
- Alternative source studies
- Require additional information (monitoring for water level and quality)
- Implement "triggers" for management
- Develop mitigation plan

March 23, 2011

Mr. Jimmy LeBon City of Sulphur P.O. Box 1309 Sulphur, LA 70664-1309

RE: February 10, 2011 Water Well Notification Submittal Ground Water Resources Well Number 10-0575 Public Supply Calcasieu Parish

Dear Mr. LeBon:

The Office of Conservation(Conservation) has completed review of the information provided in the referenced water well notification submittal. Basedon pertinent data available to this office for the area surrounding the well location, it has been determined that proposed water withdrawal from other registered water wells in the area. However, be advised that there may be unregistered water wells in the surrounding area. If necessary, the Commissioner of Conservation may, after public notice and hearing, impose applicable restrictions to the referenced well pursuant to La. R.S. 38:3097.1, et seq. and LAC 43:VI.Subpart 1 as deemednecessary to preserve and manage ground water sources.

Well identification number 10-0575 has been assigned to your well. The well identification number is highlighted in the upper right hand comer of the enclosed form which is being provided to you for your records. LAC 43:VI.703.B requires that you notify this office of any change in well information or ownership, or if the well is not installed.

Conservation water well notification regulations are available for viewing by accessing the following web link: <u>http://dmr.louisiana.gov/cons/groundwater/regulations.asp</u>. You may also contact our office to obtain a copy of the regulations.

If you have any questions, please do not hesitate to contact Robert Frischhertz, Monday through Friday, from 8:00 a.m. to 4:00 p.m. at (225) 219-0772 or send a fax to (225) 342-5529.

Yours very truly,

James H. Welsh. Commissioner of Conservation

Gary W. Snellgrove, Director Environmental Division

JHW:GWS:rpf

Enclosure

Cc: David Meche, Layne Christensen Co.

F: ENVIRONMENTAL DIVISION GROUNDWATER/WWNPS C 032311 10-0575 City of Sulphran

Action/No Action by Office of Conservation on Withdrawals (Ex. "Action" Letter, Lincoln Parish)



WildHorse Resources, LLC Conservation Order No. ENV 2014 - GW015

Page 2 of 2 September 15, 2014

- 1. A detailed report of all efforts by WildHorse to secure surface water in lieu of groundwater for use in HFS operations at the well locations.
- 2. A detailed groundwater use impact study and plan that describes the proposed maximum drawdown, addresses water level decline and potential well interference issues, provides a water level monitoring program and a means to mitigate any short and long term adverse impacts, includes periodic water level and use reporting, and provides details of all efforts to secure alternative sources of water, including plans to implement use of the same. Maximum drawdown should be depicted in plane view and cross section and be estimated through the duration of the HFS water supply operations.

This office encourages the use of alternate sources of water to groundwater for HFS operations. Please provide your response by no later than October 1, 2014.

Failure to comply with this Order may result in enforcement actions including but not limited to assessment of civil penalties as provided by law. LSA-R.S. 38:3097.3 (F)(2).

Any document(s) prepared in response to this Order should be forwarded to Christopher Delmar. Please reference the Conservation Order number (ENV 2014 - GW015).

In accordance with LSA-R.S. 38:3097.1 et seq., WildHorse may appeal this Order within 30 days of receipt.

If you have any questions concerning this Order, you may contact Christopher Delmar by phone at (225)342-3019, Monday through Friday, or by fax at (225)242-3505.

ISSUED THIS DATE PURSUANT TO LAW _____, 2014.

James H. Welsh Commissioner of Conservation

Gary W. Snellgrove Environmental Division Director

JHW:GS:cmd Enclosure

F:\Environmental Division\ADMINISTRATIVE\Orders\2014 - GW015 WildHorse 31-0362, 31-0363 09152014.doc

September 15, 2014

Michael Jordan WildHorse Resources Management Co, LLC 9805 Katy Freeway Suite 400 Houston, TX 77024

RE: August 26, 2014 Water Well Notification Submittals Ground Water Resources Well Numbers 31-0362, 31-0363 Lincoln Parish

*****CONSERVATION ORDER NO. ENV 2014 - GW015******

Dear Mr. Jordan:

This Order is issued under the general authority of the Ground Water Resources Management Law, LSA-R.S. 38:3097.1 et seq.

FINDINGS OF FACT

1. The referenced ground water wells intended for use in the drilling and hydraulic fracture stimulation (HFS) of gas wells on the Daniels 17 8H property and on the Drewett 17-8H #3 property will be installed in the Sparta aquifer by WildHorse Resources Management Co, LLC (WildHorse).

2. The Sparta aquifer system is an aquifer system that generally produces water suitable for drinking water purposes, and is currently being used predominantly for domestic and public water supply in north Louisiana, particularly in Lincoln parish.

3. There is a documented history of water level decline in the Sparta aquifer.

4. Within a quarter mile of the Drewett water well are located two rural public supply water wells

Therefore, it has been determined that additional information will be necessary to further evaluate the water withdrawal from the referenced well locations and any subsequent impact on the aquifer and nearby water wells. In accordance with LAC 43:VI.705.A, WildHorse is hereby required to provide the following information prior to use of the wells for HFS water supply purposes, in order for this office to continue its evaluation:

Recent Enforcement Actions on Water Well Notification and Registration

□ Since 7/1/2014

- Reorganization of section to streamline efficiency
- 43 compliance orders issued to water well drillers, 5 to water well owners
- 51 notices of violation to submit prior notification

Willie Jordan Jordan Water Well Service 50287 Mobley Rd. Franklinton, LA 70438

RE: Hershel Creel GWR # 59-0057

******COMPLIANCE ORDER NO ENV 2014-GWD044 ******

Dear Mr. Jordan:

This Compliance Order is issued under the general authority of the Ground Water Resources Management Law and Subsurface Waters – Well Drillers Law, Chapters 13-A-1 and 13-B respectively of Title 38 of the Louisiana Revised Statutes, and under the specific authority set forth in Section 3097.3 (F) thereof.

FINDINGS OF FACT

- This Department received a Water Well Notification form on October 2, 2014, for an irrigation well. The form stated that the irrigation well was installed August 14, 2014.
- LAC 56:I.323.C.1 states, "prior to the commencement of any construction on a new water well, the drilling contractor shall confirm that the Office of Conservation has received and responded to water well installation notification as required in LAC 43:VL701.B"

Therefore, it has been determined that Jordan Water Well Service has violated Office of Conservation Law and the regulations thereunder, specifically LAC 56:L323.C.1 in the following particulars:

Failure to confirm that the Office of Conservation has received and responded to water well installation notification as required by LAC 56:L323.C.1.

ORDER

Accordingly, Jordan Water Well Service is hereby required to comply with the following:

- 1) Provide to this office on or before December 21, 2014, a written explanation why this violation occurred.
- 2) Implement appropriate actions to prevent future recurrence of this violation.

Failure to comply with this Compliance Order may result in additional enforcement actions including but not limited to assessment of civil penalties as provided by law.

Any document(s) prepared in response to this Compliance Order should be forwarded to Robert Romero. Please reference the Compliance Order number (ENV 2014 – GWD044).

Contact Information

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Gary Snellgrove Environmental Division Director Louisiana Office of Conservation Phone: (225) 342-7222 Email: gary.snellgrove@la.gov