

**MINUTES OF THE OCTOBER 6, 2015
BOARD OF DIRECTORS MEETING OF
NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT**

The Board of Directors of North Plains Groundwater Conservation District met in regular session October 6, 2015 at 9:00 a.m. in the Conference Room of the North Plains Water Conservation Center, 6045 County Road E., Dumas, Texas 79029. The following persons were present:

Members Present at 9:05 a.m.:

Bob B. Zimmer, President;
Danny Krienke, Secretary;
Gene Born, Director;
Harold Grall, Vice-President;
Justin Crownover, Director;
Mark Howard, Director; and
Zac Yoder, Director.

Staff Present during part or all of the meeting:

Steve Walthour, General Manager;
Dale Hallmark, Assistant General Manager/Hydrologist;
Kirk Welch, Assistant General Manager/Outreach;
Kristen Lane, Executive Assistant;
Casey Tice, Compliance Coordinator;
Paul Sigle, Agriculture Engineer;
Odell Ward, GIS and Natural Resources Tech Lead; and
Lynsey McAnally, Conservation Outreach Assistant.

Others present during part or all of the meeting:

C.C. Sysombath, City of Amarillo;
Scott Clawson;
F. Keith Good, Attorney;
Jessica McCallie, Attorney; and,
Ellen Orr, Paralegal.

President Zimmer declared a quorum present and called the meeting to order at 9:05 a.m. Director Howard gave the invocation. President Zimmer led the pledge.

1 – Public Comment

President Zimmer asked if there were persons present who desired to make public comments. No public comments were received.

2 – Consent Agenda

The Consent Agenda, was discussed by the Board and consisted of: the review and approval of the Minutes of the September 15, 2015 Board Meeting; the review and approval of District expenditures for September 1, 2015 through September 30, 2015; the review and approval of payment to Lemon, Shearer, Phillips & Good, P.C. for professional services and out-of-pocket expenses from September 1, 2015 through September 22, 2015 in the amount of \$8,078.37; consideration of action to accept bid to sell property related to unpaid taxes for Lot 81, Double Diamond Estates, Unit 1, Moore County, Texas; and consideration of action to approve Dallam County Appraisal District collection contract for collection years 2016 and 2017. Gene Born moved to approve the Consent Agenda. Zac Yoder seconded the motion and it was unanimously approved by the Board.

Action Agenda 3a - Consider approval of Water Well Permits as Active and Complete Wells.

District staff processed 34 Water Well permits that are ready for Board consideration and approval. These permits, listed in the attached table, represent completed Wells that have been inspected and are in compliance with District Rules. The inspections verify that the Wells were completed as required by their permits, including proper Well location, Well classification, maximum yield, and proper installations of check valves and flow meters. The yellow highlighted permits are those Wells which were permitted prior to January 15, 2013 and unless they were drilled on breakout ground, may be metered at the well, or at the pivot. Copies of the individual permits were presented to the Board.

Well Num	Class	Max Yield	Section	Block	Survey	NS	EW
DA6139	C	800	5	3	CSS	128S	137E
DA7584	B	400	28	18	CSS	70N	436W
DA7841	C	800	36	5	CSS	214S	59E
DA8547	D	1800	1	1	J B Farthing	519 S	109 E
HA4926	C	800	0	0	H SANDERS	194N	140W
HA4928	C	800	0	0	GW ESSIG	2N	95E
HA6582	B	400	152	48	H&TC	793S	112E
HA7843	B	400	7	A4	PSL	773S	26W
HA7844	B	400	7	A4	PSL	465N	31W
HA8210	C	800	107	4	CSS	149S	831E
HA8211	C	800	106	4	CSS	766S	715E
HA8212	C	800	106	4	CSS	152S	59E
HA8352	C	800	128	44	H&TC	864S	333E
HA8426	C	800	61	2	B&B	91N	170E
HA8677	D	1800	14	3	B&B	227 N	107 W
HA8696	C	800	28	11	CSS	640 S	559 E
HA8697	C	800	28	1C	CSS	19 S	749 E
HA8698	C	800	28	11	CSS	211 S	381 W
HA8699	C	800	28	11	CSS	653 S	314 W
HA8700	C	800	29	11	CSS	648 S	550 E
HA8711	B	400	JH Lewis	NONE	NONE	1827 N	1411 E
HN5297	B	400	117	45	H&TC	333S	322W
HN8237	D	1800	19	1	WCRR	27S	763W
HN8535	D	1800	53	45	H&TC	864 N	813 W
HU8577	A	100	135	5T	T&NO	115 S	867 W
MO7834	B	400	150	3T	T&NO	405S	593W
MO-8684	B	400	311	44	H&TC	573 S	623 W
MO-8685	B	400	311	44	H&TC	316 N	843 W
OC-7637	C	800	16	4-T	T&NO	881W	645S
SH-0369	C	800	103	1-T	T&NO	36 N	736 W
SH-7879	C	800	170	1-T	T&NO	755S	142E
SH-7973	C	800	59	1-C	GH&H	450S	636E
SH-8425	C	800	85	1-C	GH&H	255 N	877 E
SH-8621	C	800	344	1-T	T&NO	106N	468W

Zac Yoder moved to approve the Water Well Permits presented to the Board on the above Schedule because the Wells are properly equipped and otherwise comply with

District Rules. Mark Howard seconded the motion and it was unanimously approved by the Board.

Action Agenda 3b - Consider Action Regarding Setting Desired Future Conditions.

In July, the General Manager provided an assessment of the District’s status related to Desired Future Conditions base on Intera’s (TWDB subcontractor) preliminary runs from High Plains Aquifer System Groundwater Availability Model. Below is the Characteristics of the GMA-1 predictive run from the preliminary HPAS GAM.

Region	Aquifer				Reference Start Year	Reference End Year	Simulation End Year	Decline Type	Note
	Ogallala	Rita Blanca	ETHP	Dockum					
NPGCD: West	40/50	2015 rate	n/a	40/50 (available drawdown)	2012	2062	2070	specialized for Ogallala*, linear for Dockum	Fixed rate in Dockum to approximate linear decline
NPGCD: East	50/50	n/a	n/a	n/a	2012	2062	2070	linear	Fixed rate in Ogallala to approximate linear
HCUWCD	80/50	n/a	n/a	n/a	2012	2062	2070	linear	Fixed rate in Ogallala to approximate linear
PGCD	50/50	n/a	n/a	50/50 (available drawdown)	2012	2062	2070	1.25%	

characteristics modeled by the subcontractor. The information contained in this item is provisional in nature and may be amended with further data.

Ogallala declines were set such that total NPGCD (West) predictive rates approximately matched historical rates at the beginning of the simulation. NPGCD (West) is comprised of Dallam, Sherman, Hartley, and Moore Counties.

The following tables show the results of combining the Ogallala, Rita Blanca and Dockum aquifers within the District in each model. The measure is in acre-feet. Combined preliminary HPAS GAM run from Intera for the Ogallala, Rita Blanca and Dockum aquifers.

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Dockum aquifers within the District in each model. The measure is in acre-feet.

Combined preliminary HPAS GAM run from Intera for the Ogallala, Rita Blanca and Dockum aquifers.

County	2015	2016	2020	2030	2040	2050	2060	2070
Dallam	381,900	402,300	368,570	296,055	232,405	172,031	116,499	73,850
Hansford	237,633	265,814	265,814	265,814	265,814	265,814	265,814	265,814
Hartley	513,944	493,485	426,894	352,668	288,203	225,129	166,516	120,905
Lipscomb	54,556	252,671	252,671	252,671	252,671	252,671	252,671	252,671
Moore	273,874	222,548	216,254	189,793	154,418	117,623	83,597	55,652
Ochiltree	113,834	231,480	231,432	231,432	231,432	231,432	231,437	231,753
Sherman	404,616	406,849	407,166	355,248	285,336	213,577	146,933	90,391
Hutchinson	65,963	58,756	60,763	62,418	63,505	63,913	63,867	62,677
Total	2,046,320	2,333,903	2,229,564	2,006,099	1,773,784	1,542,190	1,327,334	1,153,713

Current combined modeled available groundwater for the Ogallala, Rita Blanca and Dockum aquifers.

County	Year					
	2010	2020	2030	2040	2050	2060
Dallam	404,607	352,474	309,076	270,317	234,813	203,491
Hansford	284,588	262,271	240,502	218,405	197,454	177,536
Hartley	424,813	368,430	319,149	276,075	238,186	205,137
Hutchinson	61,306	58,383	50,723	44,360	39,048	34,580
Lipscomb	290,510	283,794	273,836	256,406	237,765	219,100
Moore	193,001	186,154	162,142	137,321	114,658	95,490
Ochiltree	269,463	246,475	224,578	203,704	183,227	164,265
Sherman	322,683	300,908	263,747	229,122	197,480	169,172
Total	2,250,971	2,058,889	1,843,753	1,635,710	1,442,631	1,268,771

District groundwater production in acre-feet from 2007 through 2014.

County	Year							
	2007	2008	2009	2010	2011	2012	2013	2014
Dallam	268,667	313,451	317,441	302,561	374,733	371,965	399,272	393,624
Hansford	106,887	142,694	152,686	129,984	234,903	218,793	201,914	211,634
Hartley	312,449	364,560	387,305	401,506	519,684	458,696	458,998	442,058
Hutchinson	34,973	52,846	53,869	42,023	73,747	72,230	69,716	73,992
Lipscomb	32,710	30,832	30,242	33,826	52,003	55,572	42,519	48,791
Moore	148,159	191,409	200,220	178,336	271,684	234,688	228,297	209,907
Ochiltree	53,658	75,527	65,840	62,269	114,392	109,213	98,280	106,278
Sherman	220,530	275,128	285,571	261,608	407,265	348,012	346,685	361,336
Total	1,178,033	1,446,447	1,493,174	1,412,113	2,048,411	1,869,169	1,845,681	1,847,620

West counties within the District groundwater production in acre-feet from 2007 through 2014.

County	Year							
	2007	2008	2009	2010	2011	2012	2013	2014
Dallam	268,667	313,451	317,441	302,561	374,733	371,965	399,272	393,624
Hartley	312,449	364,560	387,305	401,506	519,684	458,696	458,998	442,058
Moore	148,159	191,409	200,220	178,336	271,684	234,688	228,297	209,907
Sherman	220,530	275,128	285,571	261,608	407,265	348,012	346,685	361,336
Total	949,805	1,144,548	1,190,537	1,144,011	1,573,366	1,413,361	1,433,252	1,406,925

East counties within the District groundwater production in acre-feet from 2007 through 2014.

County	Year							
	2007	2008	2009	2010	2011	2012	2013	2014
Hansford	106,887	142,694	152,686	129,984	234,903	218,793	201,914	211,634
Hutchinson	34,973	52,846	53,869	42,023	73,747	72,230	69,716	73,992
Lipscomb	32,710	30,832	30,242	33,826	52,003	55,572	42,519	48,791
Ochiltree	53,658	75,527	65,840	62,269	114,392	109,213	98,280	106,278
Total	228,228	301,899	302,637	268,102	475,045	455,808	412,429	440,694

The tables below show that the average production from 2010-2014 and the District's combined current MAG amounts for the Ogallala, Rita Blanca and Dockum aquifers.

District		Production Average		
County	Average Annual Production 2010-2014	Estimated MAG Average 2010-2014	Annual Average DFC Available Reserve	MAG Percent Above or Below Production
Dallam	368,431	398,214	29,783	7%
Hansford	199,446	280,125	80,679	29%
Hartley	456,188	417,103	-39,085	-9%
Hutchinson	66,342	60,721	-5,620	-9%
Lipscomb	46,542	289,167	242,625	84%
Moore	224,582	197,027	-27,556	-14%
Ochiltree	98,086	264,865	166,779	63%
Sherman	344,981	318,919	-26,062	-8%
Total	1,804,599	2,212,555	407,956	18%

2014 District Production Comparison			
2014 Production	2014 Estimated MAG	2014 DFC Available Reserve	MAG Percent Above or Below Production
393,624	383,754	-9,871	-3%
211,634	275,661	64,028	23%
442,058	402,260	-39,798	-10%
73,992	60,137	-13,855	-23%
48,791	287,824	239,032	83%
209,907	190,262	-19,645	-10%
106,278	260,268	153,990	59%
361,336	313,973	-47,363	-15%
1,847,620	2,174,138	326,519	15%

West - Production Average				
County	Average Annual Production 2010-2014	Estimated MAG Average 2010-2014	Annual Average DFC Available Reserve	MAG Percent Above or Below Production
Dallam	368,431	398,214	29,783	7%
Hartley	456,188	417,103	-39,085	-9%
Moore	224,582	197,027	-27,556	-14%
Sherman	344,981	318,919	-26,062	-8%
Total	1,394,183	1,331,390	-62,793	-5%

2014 West Production Comparison			
2014 Production	2014 Estimated MAG	2014 DFC Available Reserve	MAG Percent Above or Below Production
393,624	383,754	-9,871	-3%
442,058	402,260	-39,798	-10%
209,907	190,262	-19,645	-10%
361,336	313,973	-47,363	-15%
1,406,925	1,290,249	-116,676	-9%

East - Production Average				
County	Average Annual Production 2010-2014	Estimated MAG Average 2010-2014	Annual Average DFC Available Reserve	MAG Percent Above or Below Production
Hansford	199,446	280,125	80,679	29%
Hutchinson	66,342	60,721	-5,620	-9%
Lipscomb	46,542	289,167	242,625	84%
Ochiltree	98,086	264,865	166,779	63%
Total	410,416	894,878	484,463	54%

2014 East Production Comparison			
2014 Production	2014 Estimated MAG	2014 DFC Available Reserve	MAG Percent Above or Below Production
211,634	271,198	59,564	22%
73,992	59,552	-14,440	-24%
48,791	286,480	237,689	83%
106,278	255,670	149,392	58%
440,694	872,901	432,206	50%

The General Manager recommended that the Board direct its representative to propose DFCs to include a combined 40% of the total volume in storage remaining in 50 years for the Ogallala, Dockum and Rita Blanca aquifers in Dallam, Hartley, Moore and Sherman Counties; and 50% of the total volume in storage for the Ogallala aquifer in Hansford, Hutchison, Lipscomb, and Ochiltree Counties providing that there is no substantial change in the Groundwater Availability Model.

GMA 1 has scheduled its next meeting for November 3, 2015 at 10:00 a.m. in the offices of the Panhandle Regional Planning Commission, Amarillo, Texas.

Harold Grall moved that the Board direct its representative to propose DFCs to include a combined 40% of the total volume in storage remaining in 50 years for the Ogallala, Dockum and Rita Blanca aquifers in Dallam, Hartley, Moore and Sherman Counties; and 50% of the total volume in storage for the Ogallala aquifer in Hansford, Hutchison, Lipscomb, and Ochiltree Counties providing that there is no substantial change in the Groundwater Availability Model. Gene Born seconded the motion and it was unanimously approved by the Board.

Action Agenda 3c - *Receive Report Regarding the District's Irrigated Agriculture 3 4 5 Demonstration Program and the Water Conservation Center.*

The "3-4-5" project is benefitting from good rainfall in the first year, improving the opportunities to leave water in the ground for the future. Good yields and good data to support the project are expected in the first year. Participants in the "3-4-5" project are using variable rate irrigation to simulate 3, 4, and 5 gallon per minute irrigation conditions in side-by-side, production-scale demonstrations. The "3-4-5" participants are applying the techniques and technologies used in the "200-12" program and demonstrating their applications under the selected levels of available irrigation. The District should be able to make some good comparisons that will demonstrate water management strategies at various irrigation capacities.

Early season rains delayed planting for most participants in the program, but once the crops were planted they had the advantage of a full-soil profile. The full profile is due both to rains this season and the opportunity for some cooperators to leave water in the ground last year for the first time since 2010. After the rains stopped in late August, the participants needed to irrigate to finish the crops. While participants were getting the rain, the plants were taking moisture primarily from 1, 2 and 3 feet in the soil profile. Since then, the roots are going down to 4 and 5 feet to find moisture. Crop root penetration and water extraction are monitored using advanced soil probe technology supported by gypsum soil moisture sensors.

In addition to the "3-4-5" project, the District is performing a study comparing Precision Mobile Drip Irrigation (PMDI) to LEPA. PMDI involves drip hoses being pulled across the field by the center pivot system, in order to reduce wind-loss and evaporation by applying the irrigation directly to the soil. LEPA, Low Energy Precision Application, applies the irrigation water with hoses no more than 18 inches above the soil and is reported to reach application efficiency levels of 95-percent and more. PMDI is projected to reach efficiencies approaching 98 to 99-percent.

2015 Field Days

Three "turn-row" meetings updating the progress of the "3-4-5" across the District were held on the following dates and at the locations set forth below:

September 22, 2015 – Etter, North Plains Water Conservation Center, Harold Grall's Field;

September 23, 2015 – Perryton, Ochiltree County Expo, Danny Krienke's Field; and

September 24, 2015 – Dalhart, Rita Blanca Coliseum, Zac Yoder's Field.

The "turn-row" meeting had at least 30 participants attending each meeting. NRCS, CRMWA, TWDB and other groundwater districts all sent personnel to the meetings.

Center Update

Tex-Zac installed a bypass for the small well. The pump ran for about ten minutes before the pump tripped the breaker. DB&E removed the pump and replaced the leads to the motor. After bailing the well, DB&E reinstalled the pump and it is currently working. The VFD was tested the next day and appears to be working properly.

The supplies for the subsurface drip irrigation project were delivered October 1, 2015.

Action Agenda 3d - Receive Update Regarding the District's Preparation for 2015 Annual Groundwater Production Reporting.

The District is preparing to mail out 2015 Annual Production Reports. This year each production report will have a barcode and will be scanned to track which reports have been turned in to the District. Previously, staff would pull a corresponding post card to mail out once the production report had been turned in. In order to help track the more than 2800 production reports, the District has purchased an inventory tracking system. All production reports will have a barcode that will be scanned when they are turned in to the District. Once they are scanned, they are counted as received and the system will automatically generate an e-mail for producers who have supplied the District with an e-mail address. If the District does not have an e-mail address for a producer, a copy of the production report that was turned in will be mailed to the producer by the District. The District is hoping to mail out Reports sometime in November.

Action Agenda 3e - Receive Report and Consider Action Regarding Compliance Matters Before the District.

Two (2) unresolved overproduced 2014 Annual Production Reports are pending involving undivided interest in properties belonging to two (2) parties. Letters have been sent to both parties to pay a late filing fee, or resolve the issue by re-establishing a GPU by October 9, 2015. The General Manager stated that if these issues were not resolved with the District by the November Board Meeting, the General Manager would request that the Board issue a Show Cause Order regarding this matter.

Discussion Agenda 4c - General Manager's Report.

Steve Walthour presented the General Manager's Report, including information concerning upcoming meetings and conferences, the General Manager's activity summary and the District activity summary.

Discussion Agenda 4b - Committee Reports.

None.


Discussion Agenda 4a - Director Reports Regarding Meetings and/or Seminars Attended, Weather Conditions and Economic Development in Each Director's Precinct.

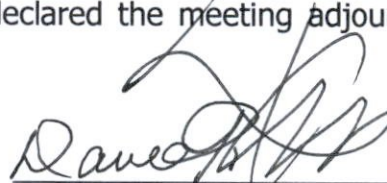
District Directors reported to the Board regarding meetings and/or seminars attended, weather conditions and economic development in each Director's precinct.

Keith Good, General Counsel for the District, discussed the amendment of the District's Enabling Legislation regarding its Directors' election date with the Board.

Agenda 6 - Adjournment.

There being no further business to come before the meeting, Justin Crownover moved to adjourn the meeting. Gene Born seconded the motion and it was unanimously approved by the Board. President Zimmer declared the meeting adjourned at 10:02 a.m.


Bob B. Zimmer, President


Daniel L. Krienke, Secretary