STATE OF NEBRASKA
DEPARTMENT OF NATURAL RESOURCES

APPLICATION FOR A PERMIT TO TRANSFER GROUND WATER TO ADJOINING STATE

INSTRUCTIONS

This form must be completed in full. An incomplete or defective form will be returned. Failure to resubmit a corrected application within the time limit specified will cause dismissal of the application. Complete items 1-8 by printing in ink or typing the appropriate information. The following information is also required (see Department Rules, Title 456, Chapter 6 for requirements):

1. A map submitted on 8½" x 11" paper or paper folded to such a size showing the location of the well(s); the pipeline(s) or other means of transporting water; the location of use.
2. Information on the possible negative effects of the proposed withdrawal on ground water and surface water supplies in the area.

A non-refundable filing fee of $10 (payable to the Department of Natural Resources) must accompany this application. Forward this application, fee and map to: **Department of Natural Resources, P.O. Box 94676, Lincoln, Nebraska 68509-4676.** The telephone number is (402) 471-2363.

For Department Use Only

Filed at 8:11 a.m./~~p.m.~~ on February 22, 20 10

Application No. TA- 46

Natural Resources District South Platte

Receipt No. G-154 Amount $10.00

1. Name of applicant: Pine Bluffs Gravel + Excavating, Inc Telephone Number (307) 245-3426
   Address PO Box 609
   City Pine Bluffs State WY Zip Code 82082 + 0609

2. If applicable: Well Registration Number(s) G-095192, G-060621, G060622
   Management or Control Area Permit/Number(s) _____

3. Identify the location and capacity of well(s):

NW ¼ of the NW ¼ of Section	5	Township 15 North, Range 55	E ☐	W ☒	Kimball	County,	700	gpm
NW ¼ of the NW ¼ of Section	8	Township 15 North, Range 55	E ☐	W ☒	Kimball	County,	700	gpm
SW ¼ of the SW ¼ of Section	8	Township 15 North, Range 55	E ☐	W ☒	Kimball	County,	700	gpm
___ ¼ of the ___ ¼ of Section	___	Township ___ North, Range ___	E ☐	W ☐		County,		gpm
___ ¼ of the ___ ¼ of Section	___	Township ___ North, Range ___	E ☐	W ☐		County,		gpm

4. Identify the location of use:
   Logan and Weld County Colorado

5. Maximum annual quantity of ground water requested for use in adjoining state: 10 acre-feet per annum

6. Maximum daily withdrawal requested: 75,000 gallons per day

(over)

app

7. Ground water is proposed to be used for: ☐ Irrigation ☐ Public Water Supply ☒ Commercial/Industrial ☐ Domestic ☐ Livestock

☐ Other (explain) _____

8. Projected date water will first be pumped or date water was first pumped April 1, 2010

9. State all alternative sources of water that are available and why applicant chooses not to use them:

Water is available from municipalities and commercial wells in the State of Colorado. The closest municipality, Sterling would be roughly 50 miles from construction locations near the Nebraska border. The location of our concrete batch plant in Kimball is closer to many of the projects. In addition, we begin and end our day in Kimball Nebraska typically so using the Kimball location greatly decreases time and fuel cost at beginning of day. The commercial well location in Weld County is more convenient and satisfies the majority of our needs, but we fear the many mechanical, geological, and governmental threats that could stop water production from just one well, therefore we would like to use the Kimball batch plant as a backup source to the commercial well in Weld County.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete and accurate.

Pine Bluffs Gravel by:

Doug Keller
Signature of Applicant

February 19, 2010
Date

7. Ground water is proposed to be used for: ☐ Irrigation ☐ Public Water Supply ☒ Commercial/Industrial ☐ Domestic ☐ Livestock

☐ Other (explain)

8. Projected date water will first be pumped or date water was first pumped April 1, 2010

9. State all alternative sources of water that are available and why applicant chooses not to use them:

Water is available from municipalities and commercial wells in the State of Colorado. The closest municipality, Sterling would be roughly 50 miles from construction locations near the Nebraska border. The location of our concrete batch plant in Kimball is closer to many of the projects. In addition, we begin and end our day in Kimball Nebraska typically so using the Kimball location greatly decreases time and fuel cost at beginning of day. The commercial well location in Weld County is more convenient and satisfies the majority of our needs, but we fear the many mechanical, geological, and governmental threats that could stop water production from just one well, therefore we would like to use the Kimball batch plant as a backup source to the commercial well in Weld County.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete and accurate.

Pine Bluffs Gravel by:

Doug Keller
Signature of Applicant

February 19, 2010
Date

STATE OF NEBRASKA)
) SS.
DEPARTMENT OF WATER RESOURCES)

This is to certify that the foregoing Application Number 10592 for a permit to withdraw, transport and use ground water has been examined, and it is hereby approved as follows:

1st. That the priority date of this permit is 1938.

2nd. That the amount of water the applicant may withdraw, transport and use under this permit shall not exceed 5,300,000 gallons per day.

3rd. That on or before January 31 of each year, the applicant shall file in the office of the Department of Water Resources a statement showing (1) the annual daily average amount and the maximum daily amount of water withdrawn under this permit during the preceding calendar year, and (2), the designations of any wells under this permit which were abandoned and the location and description of any replacement wells installed during the preceding calendar year.

FRANK B. MORRISON, GOVERNOR OF NEBRASKA
DEPARTMENT OF WATER RESOURCES

Dan S. Jones Jr.
Director of Water Resources

Dated May 10, 1965.

A-10592
ord

Application No. 10592

Division No. 1-E

APPLICATION FOR A PERMIT TO
WITHDRAW, TRANSPORT AND USE
THE GROUND WATER OF THE
STATE OF NEBRASKA FOR MUNICIPAL PURPOSES

Priority Date: 1938

STATE OF NEBRASKA)
) SS.
DEPARTMENT OF WATER RESOURCES)

This instrument was filed for record at 9:30 o'clock A. M., on the 30th day of March, 1965, and duly recorded in Book 75 of the Record of Applications for Appropriations on Page 535.

Dan S. Jones, Jr.
Director MLK

Return to Search Page

Nebraska Department of Natural Resources
Database Through: 2/16/2010
Processed: 2/16/2010 12:33:49 PM

Registration Number G-060621, Well ID 68401

Geo Logs

FromDepth	ToDepth	Description
0	6	SOIL
6	20	SOFT SILTY TO SANDY BROWN CLAY & SOIL MATERIAL
20	35	SOFT SILTY TO SANDY BROWN CLAY
35	45	LOOSE SAND SOME FINE GRAVEL & BROKEN GRANULAR CLAY
45	60	LOOSE SAND TO MEDIUM GRAVEL FEW BOULDERS
60	80	LOOSE SAND & MEDIUM TO COARSE GRAVEL
80	100	SOFT SILTY BROWN CLAY
100	125	SOFT TO FIRM SILTY & SANDY BROWN & LIMY CLAY
125	127	CEMENTED SAND & GRAVEL SOME LIMY SILTY CLAY
127	148	FIRM TO SOFT BROWN SILTY CLAY & LIMY CLAY STREAKS
148	158	SOFT GRAY TO BROWN SANDY CLAY
158	160	FIRM LIMY CLAY TO LIMY SILTSTONE THIN LEDGES
160	180	FIRM SANDY TO SILTY BROWN CLAY LIMY CLAY STREAKS
180	200	FIRM TO SOFT SANDY SILT & CLAY LIMY CLAY STREAKS
200	240	SOFT SILTY CLAY & SOME GRAN SILTSTONE LIMY CLAY
240	260	SOFT SILTY CLAY SOME GRANULAR SANDY SILTSTONE
260	284	SOFT FIRM LAYERS SANDY TO SILTY CLAY FINE BR SS
284	300	LOOSE SAND TO MEDIUM GRAVEL SOME COARSE
300	312	LOOSE COARSE SAND & FINE TO MEDIUM GRAVEL
312	315	LIMY CLAY FIRM
315	320	SAND & GRAVEL WITH LAYER BROWN SILTY CLAY
320	330	COARSE SAND & FINE TO MEDIUM GRAVEL TRACE CLAY
330	340	COARSE SAND & FINE MEDIUM GRAVEL WITH TRACE CLAY
340	366	LOOSE MEDIUM TO COARSE SAND & GRAVEL VERY CLEAN
366	380	FIRM BRULE

Casing and Screen

Grount and Gravel

Return to Search Page

Nebraska Department of Natural Resources
Database Through: 2/16/2010
Processed: 2/16/2010 12:35:32 PM

Registration Number G-060622, Well ID 68402

Geo Logs

FromDepth	ToDepth	Description
0	2	SANDY SOIL
2	10	LOOSE COARSE SAND & MEDIUM COARSE GRAVEL
10	20	LOOSE MEDIUM SAND & GRAVEL WITH CLAY STREAKS
20	37	LOOSE MEDIUM SAND & GRAVEL
37	56	SOFT BROWN SILTY CLAY
56	60	GRAVEL STREAK SOME CLAY
60	80	SILTY TO SANDY CLAY
80	90	COARSE SAND TO MEDIUM GRAVEL
90	100	COARSE SAND TO FINE GRAVEL & SILTY CLAY FIRM CLAY
100	120	SILTY CLAY
120	130	GREEN & BROWN SILTY CLAY WITH GRAVEL LAYERS
130	160	FINE MEDIUM SAND & GRAVEL WITH CLAY STREAKS
160	180	SILTY CLAY & FINE SAND & GRAVEL LAYERS
180	190	SANDY TO SILTY CLAY & LAYERS MEDIUM COARSE GRAVEL
190	200	SANDY SILTY CLAY TRACE GRAVEL FIRM LAYER
200	220	SANDY SILTY CLAY SOME LIMY & 40% FINE GRAVEL
220	240	SANDY SILTY & LIMY CLAY WITH THIN GRAVELSTREAKS
240	258	LOOSE COARSE SAND & MEDIUM TO COARSE GRAVEL
258	262	CLAY
262	300	LOOSE COARSE SAND & FINE TO MEDIUM GRAVEL
300	329	LOOSE COARSE SAND & MEDIUM TO COARSE GRAVEL
329	333	FIRM LIMY CLAY
333	340	FIRM LIMY CLAY & SOFT SILT OR SAND LAYERS
340	350	FIRM SILTSTONE OR SANDSTONE VERY LITTLE RETURN

Casing and Screen

Grount and Gravel

Return to Search Page
Nebraska Department of Natural Resources
Database Through: 2/16/2010
Processed: 2/16/2010 12:33:08 PM

Registration Number G-095192, Well ID 111035

Geo Logs

FromDepth	ToDepth	Description
0	50	Sand Fine Medium Gravel
50	60	Sand Clay Layers
60	96	Sand Clay & Mag Layers
96	104	Clay & Mag
104	114	Coarse Sand Small Clay
114	126	Clay & Mag
126	131	Clay & Mag
131	140	Clay & Mag
140	172	Clay Small Mag Layers
172	180	Coarse Sand Fine Gravel
180	204	Coarse Sand
204	216	Coarse Sand Fine Gravel
216	220	Clay & Mag
220	240	Clay & Mag
240	271	Clay Fine Sand
271	298	Fine Sand
298	320	Clay & Mag
320	376	Coarse Sand
376	380	Clay
380	398	Brule
398	400	Clay

Casing and Screen

FromDepth	ToDepth	CaseOrScreen	InsideDiam	OutsideDiam	CaseThickness	Material	ScrnSlotSize	ScreenTname
0	335	casing	15.625		0.375	Steel		
335	375	screen	15.625	16		Stainless	0.07	Johnson

Grount and Gravel

FromDepth	ToDepth	GroutOrGravel	Material
0	56	grout	Bentonite Groute
320	378	gravel	

Proposed Operating Schedule

Pine Bluffs Gravel & Excavating, inc. operates normally on a 5 day work week M-F. The withdrawal of water from the Kimball "Cornhusker Concrete" batch plant would occur between the hours of 6 am and 5 pm M-F.

Our construction projects are generally more prevalent when weather is favorable for outside construction with temperatures above freezing. We have on occasion had projects requiring construction water in all months.

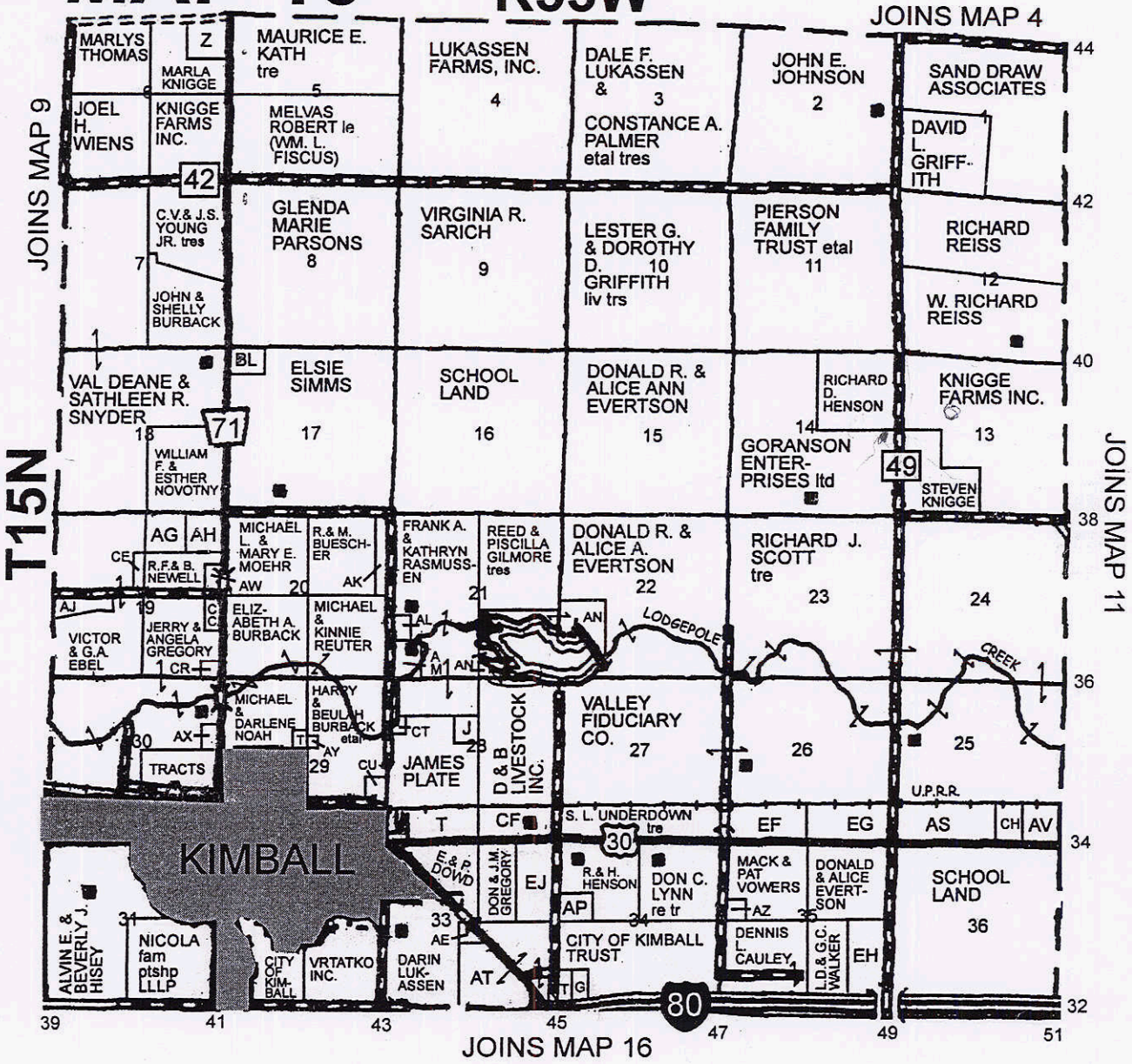
The projects we currently have scheduled for 2010 include the reconstruction of Minuteman Missile Roads in the Nebraska Panhandle, Northeast Colorado, and Southeast Wyoming. We have also bid energy projects that have not been awarded as of application date.

X City of Kimball Wells

• Other domestic + irrigation wells

MAP 10

R55W


JOINS MAP 4
JOINS MAP 9
JOINS MAP 11
JOINS MAP 16
T15N
MARLYS THOMAS
MARLA KNIGGE
MAURICE E. KATH tre
LUKASSEN FARMS, INC.
DALE F. LUKASSEN & CONSTANCE A. PALMER etal tres
JOHN E. JOHNSON
SAND DRAW ASSOCIATES
DAVID L. GRIFFITH
JOEL H. WIENS
KNIGGE FARMS INC.
MELVAS ROBERT le (WM. L. FISCUS)
C.V.& J.S. YOUNG JR. tres
JOHN & SHELLY BURBACK
GLENDA MARIE PARSONS
VIRGINIA R. SARICH
LESTER G. & DOROTHY D. GRIFFITH liv trs
PIERSON FAMILY TRUST etal
RICHARD REISS
W. RICHARD REISS
VAL DEANE & SATHLEEN R. SNYDER
WILLIAM F. & ESTHER NOVOTNY
ELSIE SIMMS
SCHOOL LAND
DONALD R. & ALICE ANN EVERTSON
RICHARD D. HENSON
GORANSON ENTER-PRISES ltd
KNIGGE FARMS INC.
STEVEN KNIGGE
R.F.& B. NEWELL
MICHAEL L. & MARY E. MOEHR
R.& M. BUESCHER
FRANK A. & KATHRYN RASMUSSEN
REED & PISCILLA GILMORE tres
DONALD R. & ALICE A. EVERTSON
RICHARD J. SCOTT tre
VICTOR & G.A. EBEL
JERRY & ANGELA GREGORY
ELIZABETH A. BURBACK
MICHAEL & KINNIE REUTER
LODGEPOLE CREEK
MICHAEL & DARLENE NOAH
HARRY & BEULAH BURBACK etal
TRACTS
JAMES PLATE
D & B LIVESTOCK INC.
VALLEY FIDUCIARY CO.
U.P.R.R.
S. L. UNDERDOWN tre
KIMBALL
E. & P. DOWD
DON & J.M. GREGORY
R.& H. HENSON
DON C. LYNN re tr
MACK & PAT VOWERS
DONALD & ALICE EVERTSON
SCHOOL LAND
ALVIN E. & BEVERLY J. HISEY
NICOLA fam ptshp LLLP
CITY OF KIMBALL
VRTATKO INC.
DARIN LUKASSEN
CITY OF KIMBALL TRUST
DENNIS L. CAULEY
L.D.& G.C. WALKER
71
42
49
30
80

FALL 2009 GROUND WATER LEVEL REPORT

DATE: 11/20/09

TO: SOUTH PLATTE NRD BOARD OF DIRECTORS

FROM: Chris Kaiser

RE: SOUTH PLATTE NRD GROUND WATER LEVEL REPORT

This report summarizes the results of fall 2009 ground water level measurements. Summary sheets showing one and five year ground water level changes by county and physical region are attached. The report also contains maps of the water level differences of one, five, 20, and 30 years. Also included is a map and table of three year rolling averages (fully-appropriated and over-appropriated). Maps were designed using spatial analyst and the best available data at the time. The maps do not consider any trends within the data or geology, precipitation, elevation, etc, only the current water level at that given point and anything in between these points, is an interpretation. The further the distance between two points, the interpolated surface will average out this bias rather than preserve it. These maps also show areas within our district where there are no monitoring wells present. Data would be more accurate if we could place wells within these designated areas. A Nebraska Environmental Trust grant has been submitted to drill thirty 39 monitoring wells in these crucial areas where we have no way to determine groundwater level changes. If the SPNRD receives this grant, our groundwater data will be more realistic and accurate. We will find out in April if the SPNRD received the grant or not.

The one year ground water levels in Cheyenne County inclined 1.64 feet on average with 24.73 percent of wells measured showing declines. Deuel County showed an average incline of 1.27 feet with 17.39 percent of measured wells showing declines. Kimball County showed 46.88 percent of measured wells declining with an average incline of 0.22 feet.

Five year results show the largest decline in Kimball County with an average decline of 2.76 feet and 77 percent of wells showing a decline. Cheyenne County has an average incline of 0.28 feet with 44 percent of wells showing a decline. Deuel County has an average incline of 1.61 feet with 21 percent of wells showing a decline.

Twenty year results show the largest decline in Cheyenne County, where average water levels show a 9.11 foot drop compared to 1990 levels. Deuel County has an average decline of 0.75 feet while Kimball County averages show a 5.04 foot decline. Overall, twenty year results for the entire district show that 77 percent of wells have declined.

Thirty year results show an incline compared to twenty year results, respectively. Kimball County wells dropped an average of 1.86 feet while Deuel County well averages dropped 0.97 feet. The largest decline is in Cheyenne County where wells had an average of a 4.89 foot decline.

Following is a detailed report of this fall's levels.

South Platte NRD 1 year report by region

County	PhysReg	Ave	Max	Min	# Wells	Declines	%Decline
Cheyenne							
	Cheyenne Table	0.52	8.78	-4.59	45	16	35.6%
	Lodgepole Creek	2.65	11.18	-0.14	14	1	7.1%
	Sidney Draw	1.86	6.21	-0.68	11	3	27.3%
	Sidney Area	3.11	8.97	-1.64	23	3	13.0%
Deuel							
	Deuel Table	1.46	7.05	-4.53	8	2	25.0%
	Lodgepole Creek	1.12	2.76	-2.47	8	1	12.5%
	South Platte	1.24	2.42	-0.90	7	1	14.3%
Kimball							
	Kimball Table	0.94	5.18	-3.02	11	4	36.4%
	Lodgepole Creek	-0.16	4.51	-5.63	21	11	52.4%

South Platte NRD 1 year stats by county

County	Ave	Max	Min	# Wells	Declines	% Declines
Cheyenne	1.64	11.18	-4.59	93	23	24.73%
Deuel	1.27	7.05	-4.53	23	4	17.39%
Kimball	0.22	5.18	-5.63	32	15	46.88%

South Platte NRD 5 yr stats by region

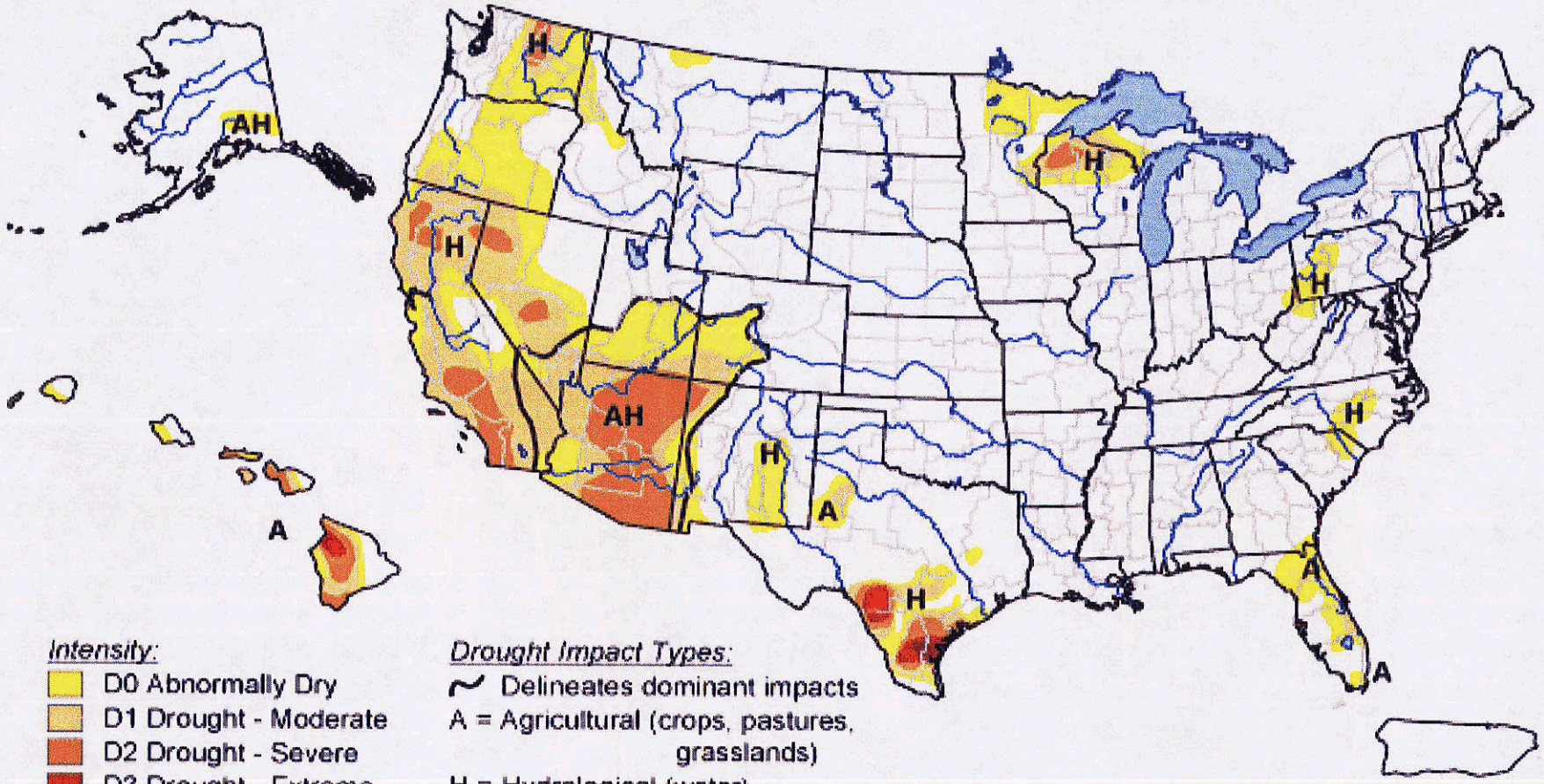
County	PhysReg	Ave	Max	Min	# of Wells	Declines	%Declines
Cheyenne							
	Cheyenne Table	-0.83	9.08	-14.05	44	25	56.8%
	Lodgepole Creek	1.36	9.63	-2.23	13	5	38.5%
	Sidney Draw	-0.60	4.26	-5.56	12	9	75.0%
	Sidney Area	2.17	4.96	-2.33	24	2	8.3%
Deuel							
	Deuel Table	-0.09	4.98	-9.30	8	3	37.5%
	Lodgepole Creek	2.21	4.54	-0.77	8	1	12.5%
	South Platte	2.85	15.89	-1.36	7	1	14.3%
Kimball							
	Kimball Table	-1.47	4.25	-8.08	10	7	70.0%
	Lodgepole Creek	-3.38	1.11	-14.71	21	17	81.0%

South Platte 5 yr Stats by county

County	Ave	Max	Min	#of Wells	Declines	% Declines
Cheyenne	0.28	9.63	-14.05	93	41	44.1%
Deuel	1.61	15.89	-9.30	23	5	21.7%
Kimball	-2.76	4.25	-14.71	31	24	77.4%

U.S. Drought Monitor

November 17, 2009
Valid 7 a.m. EST



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

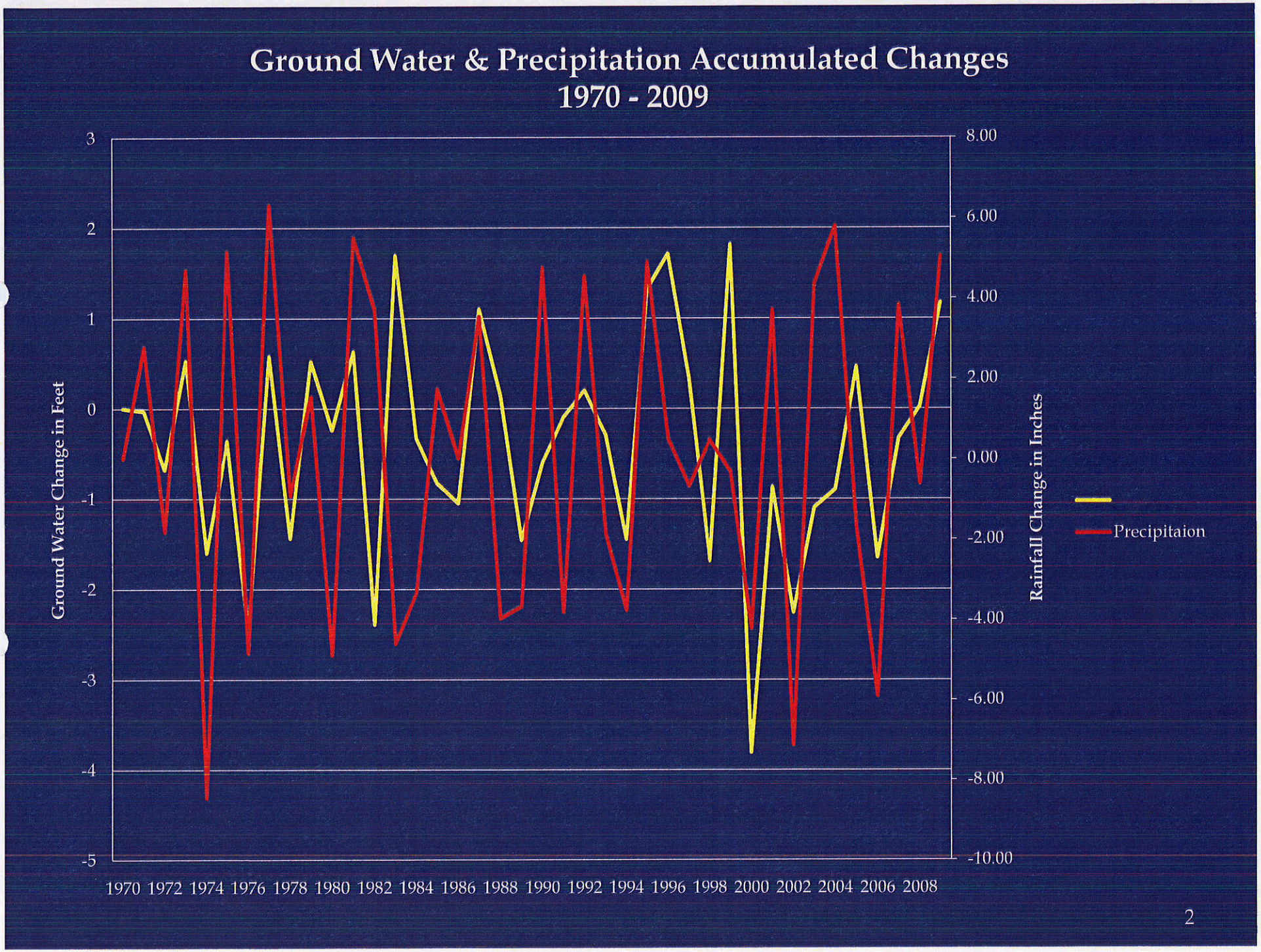
Drought Impact Types:

Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

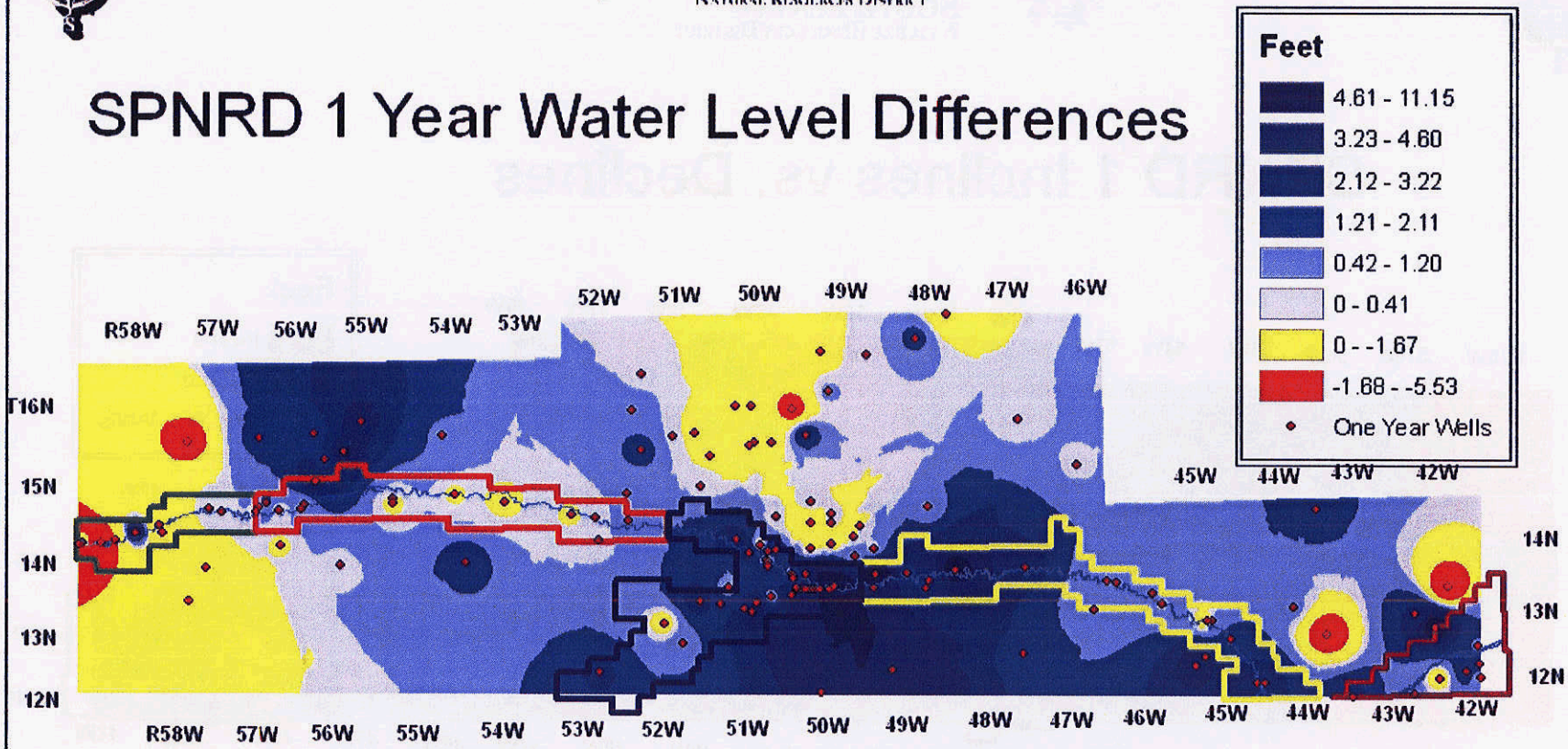
http://drought.unl.edu/dm

Released Thursday, November 19, 2009
Author: Eric Luebehusen, U.S. Department of Agriculture


Ground Water & Precipitation Accumulated Changes
1970 - 2009
Ground Water Change in Feet
Rainfall Change in Inches
3
2
1
0
-1
-2
-3
-4
-5
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
-10.00
1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008
Precipitaion

SOUTH PLATTE
NATURAL RESOURCES DISTRICT

SPNRD 1 Year Water Level Differences



South Platte NRD 1 Year Stats by County

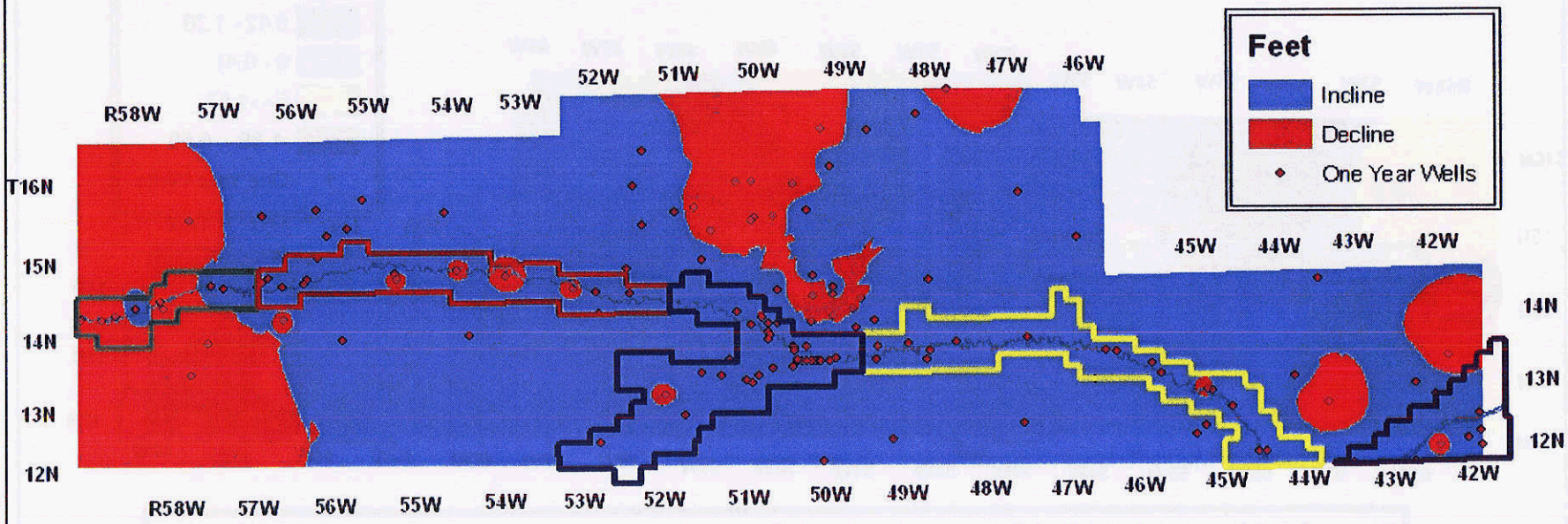
County	Ave	Max	Min	Count	Decline	% Declines
Cheyenne	1.64	11.18	-4.59	93	23	24.73%
Deuel	1.27	7.05	-4.53	23	4	17.39%
Kimball	0.22	5.18	-5.63	32	15	46.88%

0 2.5 5 10 Miles

Fall 2008 - Fall 2009

SOUTH PLATTE
NATURAL RESOURCES DISTRICT

SPNRD 1 Inclines vs. Declines

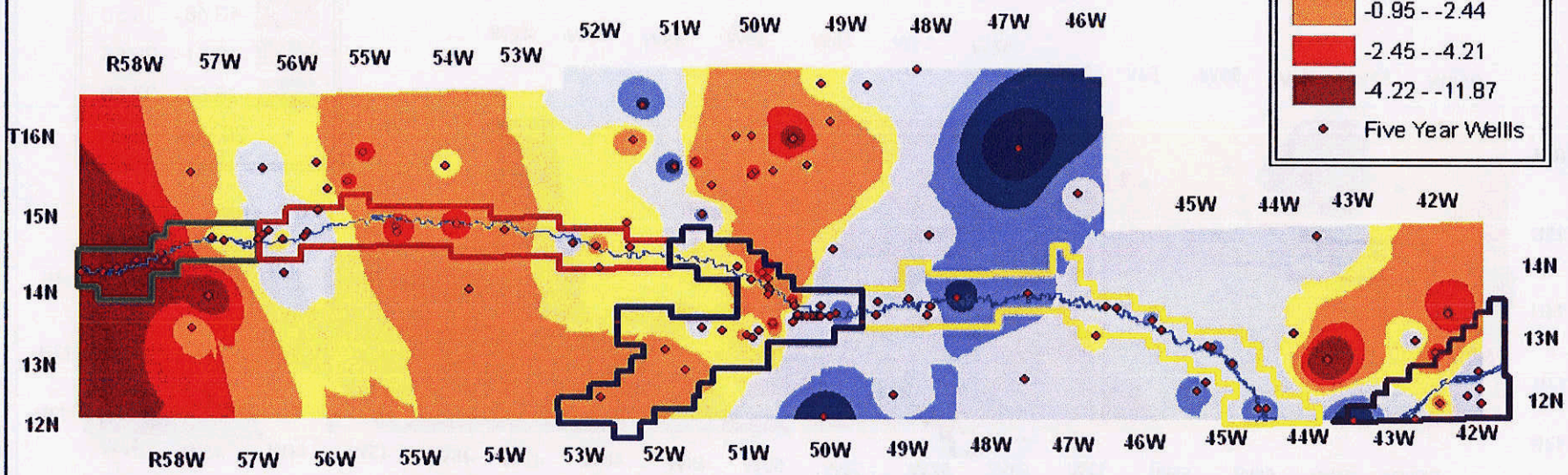


0 5 10 20 Miles

Fall 2008- Fall 2009

SOUTH PLATTE NATURAL RESOURCES DISTRICT

SPNRD 5 Year Water Level Differences



South Platte NRD 5 Year Stats by County

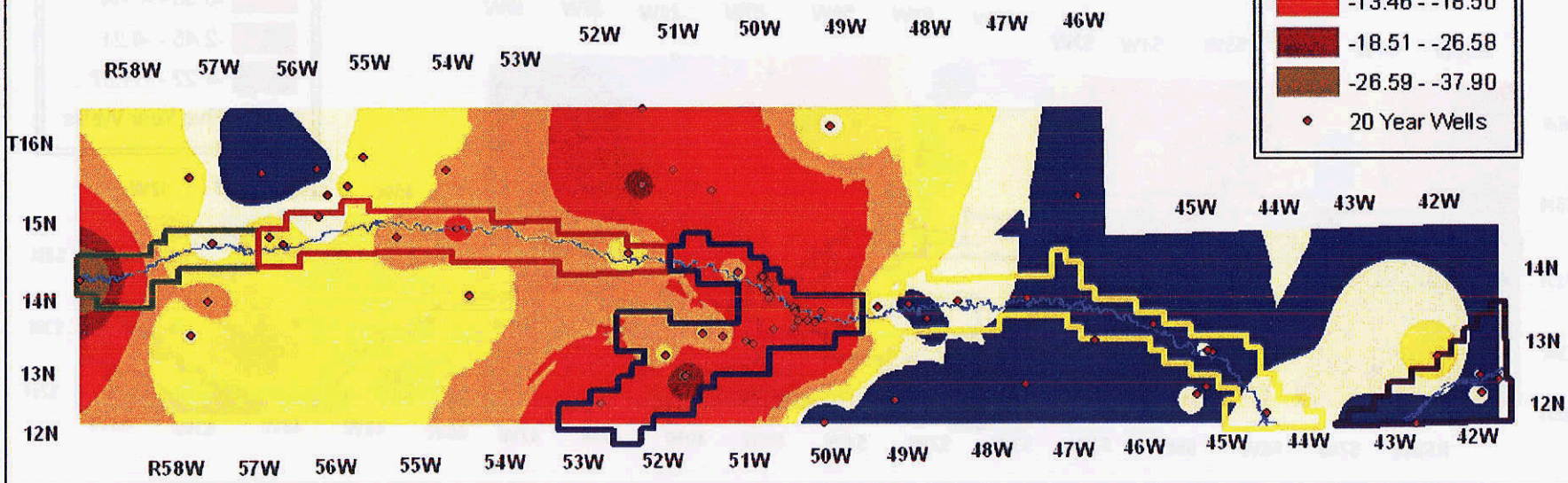
County	Ave	Max	Min	Count	Decline	% Declines
Cheyenne	0.28	9.63	-14.05	93	41	44.08%
Deuel	1.61	15.89	-9.3	23	5	21.74%
Kimball	-2.76	4.25	-14.71	31	24	77.42%

0 5 10 20 Miles

Fall 2005 - Fall 2009

SOUTH PLATTE
NATURAL RESOURCES DISTRICT

SPNRD 20 Year Water Level Differences



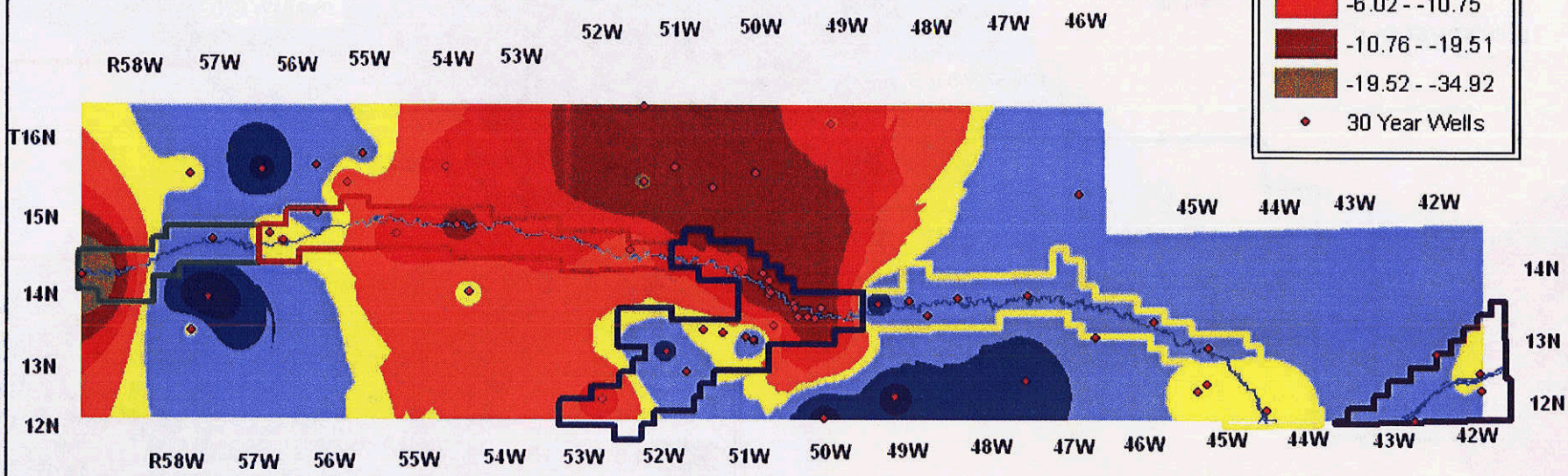
Fall 1990 - Fall 2009

South Platte NRD 20 Year Stats by County

County	Ave	Max	Min	Count	Decline	% Declines
Cheyenne	-9.11	7.4	-28.22	37	29	78.37%
Deuel	0.75	13.64	-6.01	11	6	54.54%
Kimball	-5.04	8.08	-37.91	17	15	88.24%

SOUTH PLATTE NATURAL RESOURCES DISTRICT

SPNRD 30 Year Water Level Differences

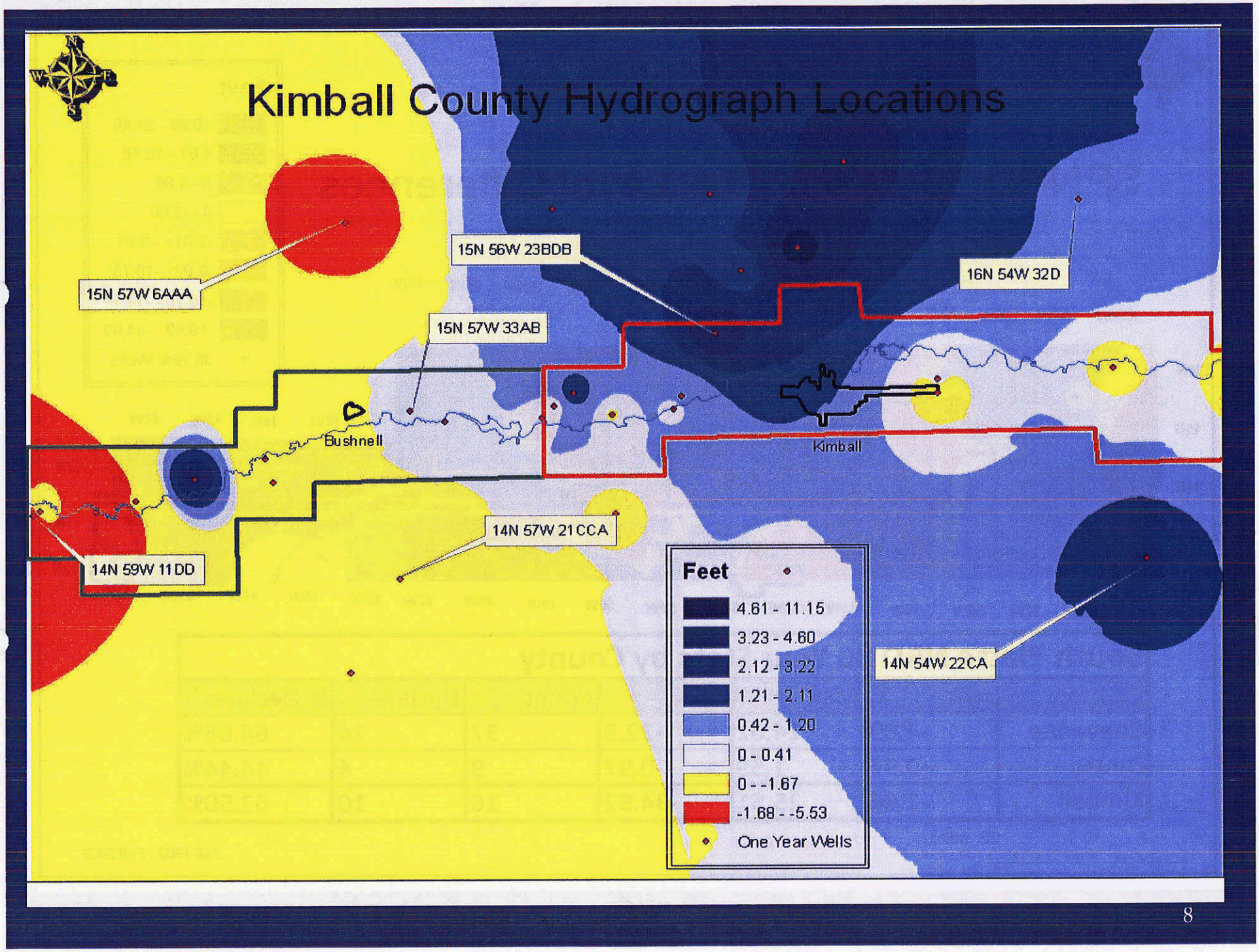


South Platte NRD 30 Year Stats by County

County	Ave	Max	Min	Count	Decline	% Declines
Cheyenne	-4.89	14.02	-22.9	37	24	64.86%
Deuel	-0.97	1.59	-0.97	9	4	44.44%
Kimball	-1.86	25.51	-34.92	16	10	62.50%

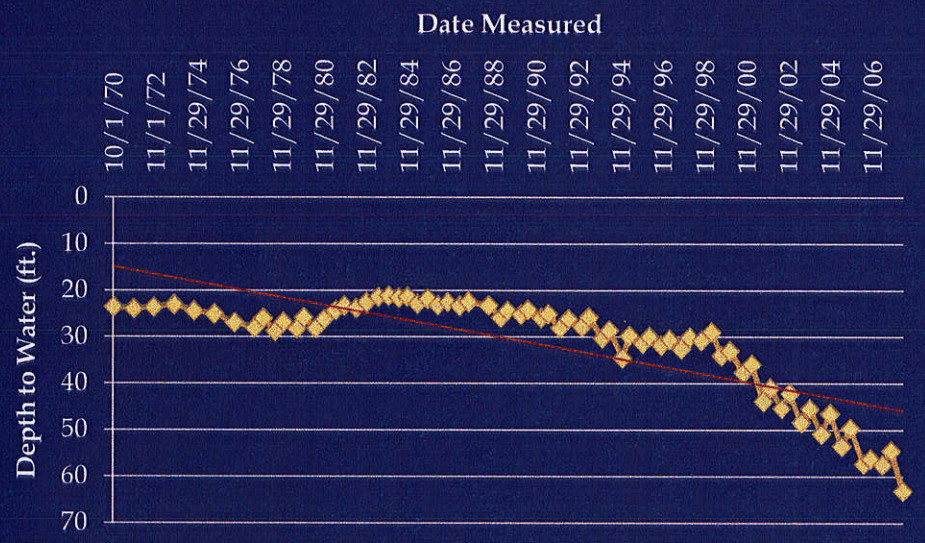
0 5 10 20 Miles

Fall 1980 - Fall 2009


Kimball County Hydrograph Locations
N
W
E
S
15N 57W 6AAA
15N 56W 23BDB
16N 54W 32D
15N 57W 33AB
Bushnell
Kimball
14N 57W 21CCA
14N 59W 11DD
14N 54W 22CA
Feet
4.61 - 11.15
3.23 - 4.60
2.12 - 3.22
1.21 - 2.11
0.42 - 1.20
0 - 0.41
0 - -1.67
-1.68 - -5.53
One Year Wells

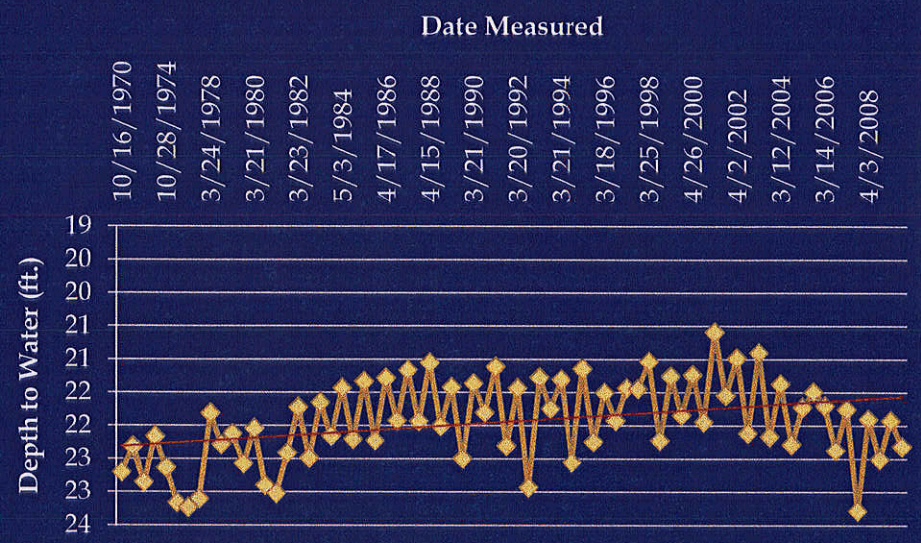
14N 59W 11DD

NE/WY Stateline 1 East of Pine Bluffs



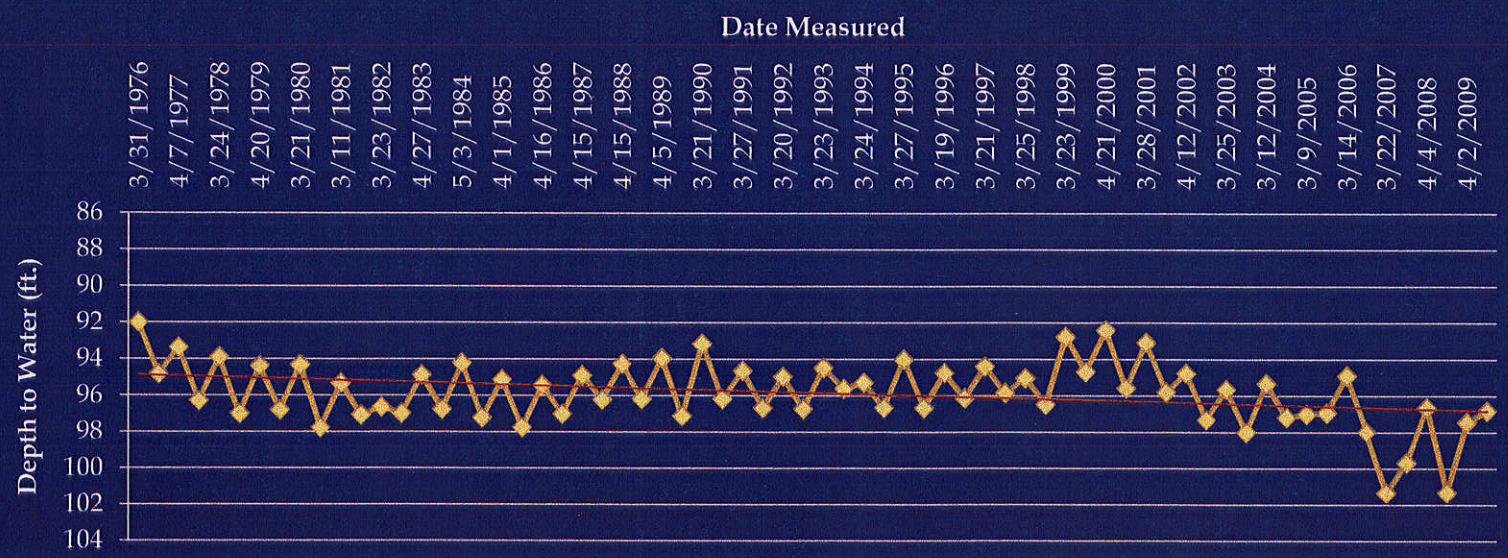
15N 57W 33AB

1 East of Bushnell

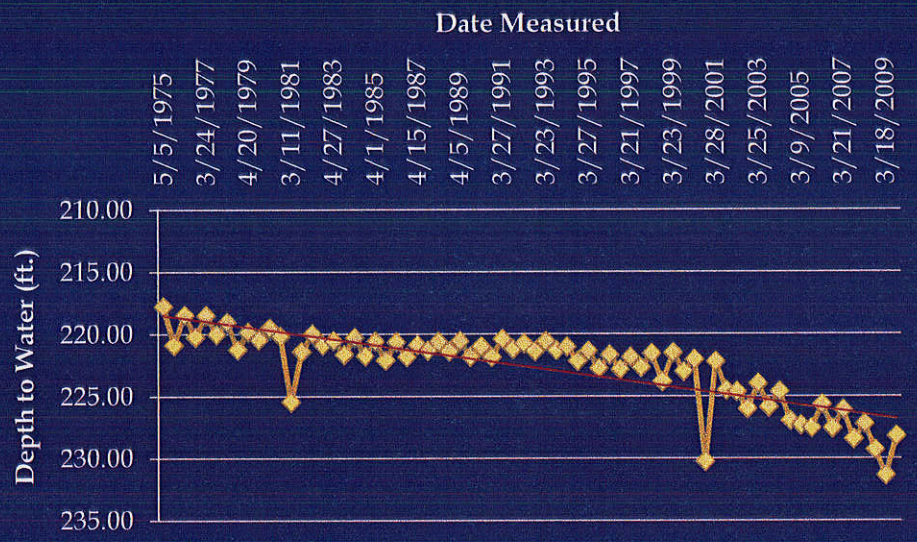


15N 56W 23BDB

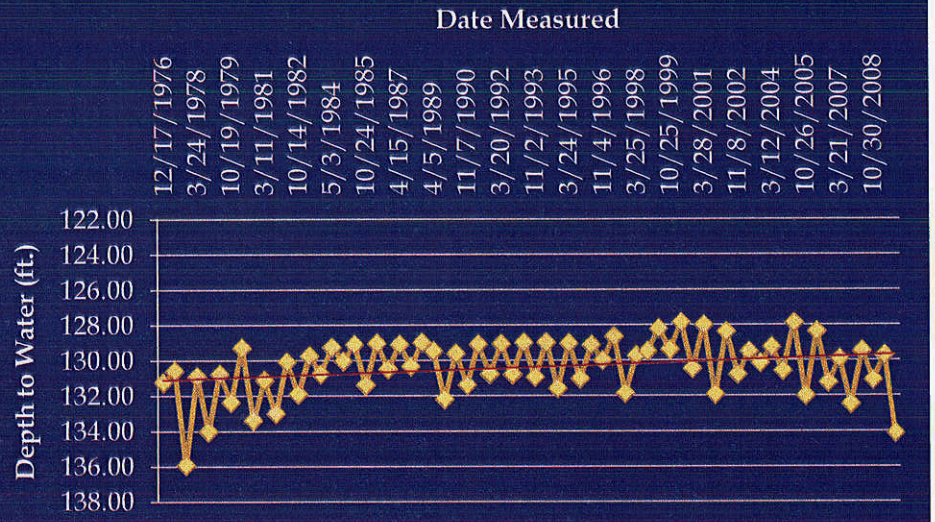
3 West 2 North of Kimball



16N 54W32D
5 North 2 West of Dix

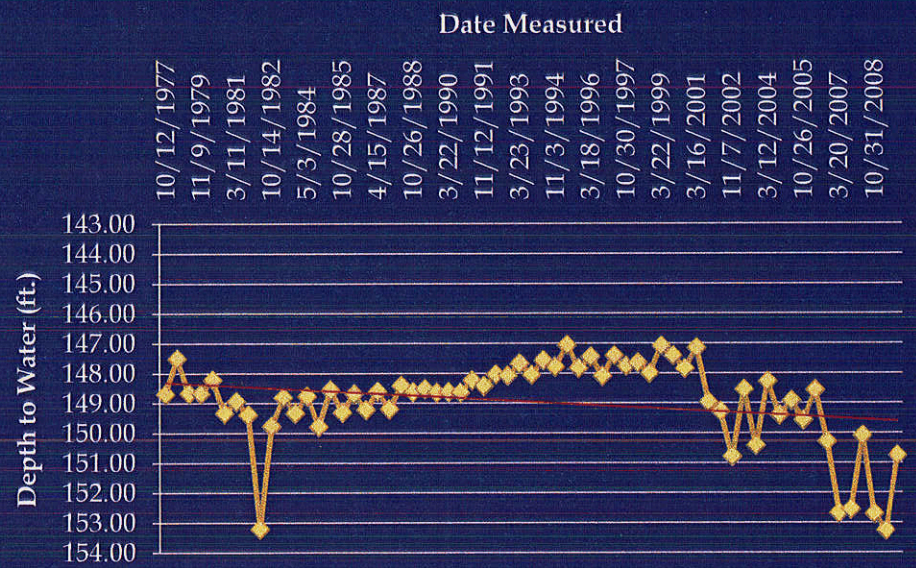


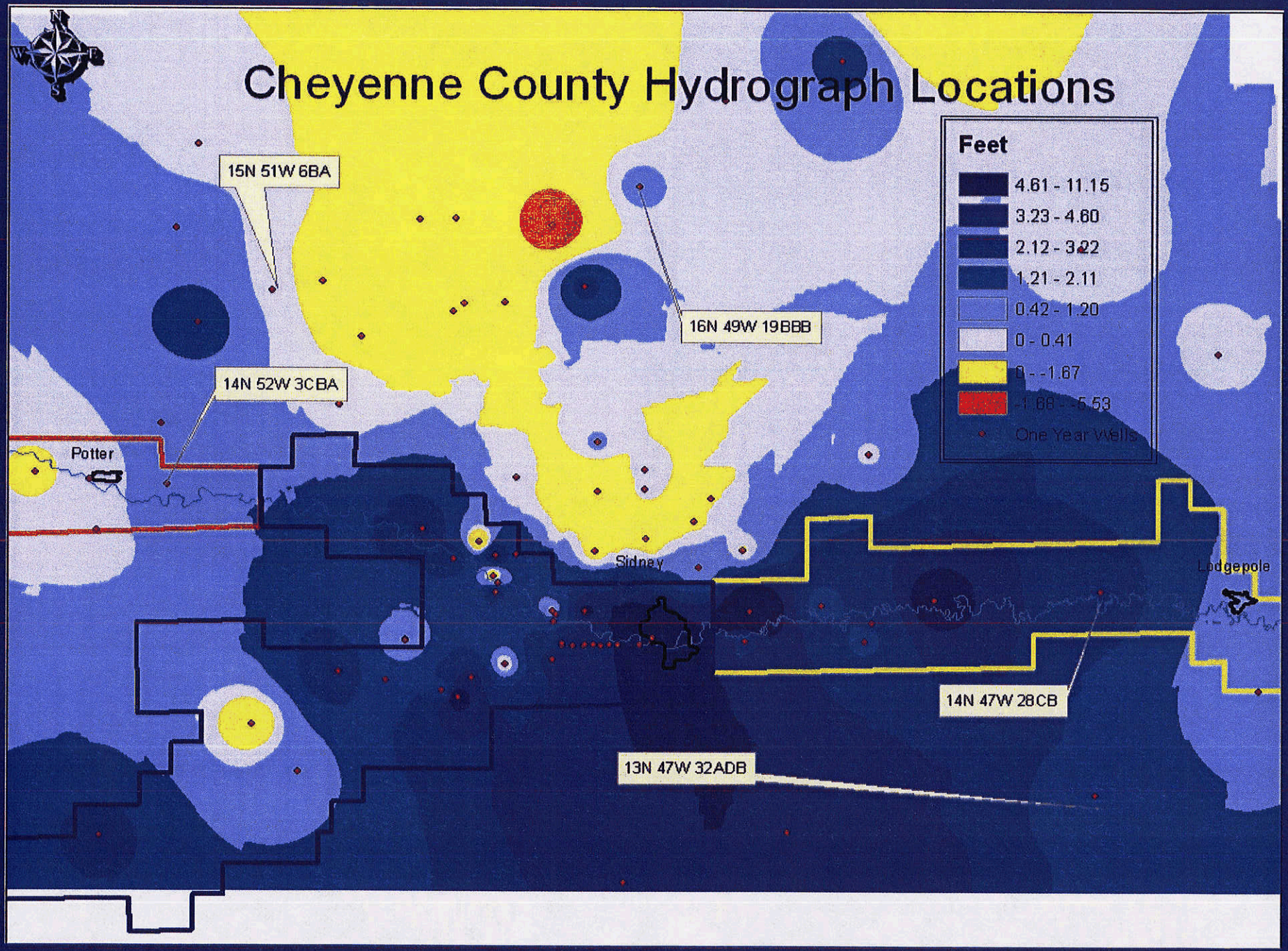
15N 57W 6AAA
5 North of Bushnell



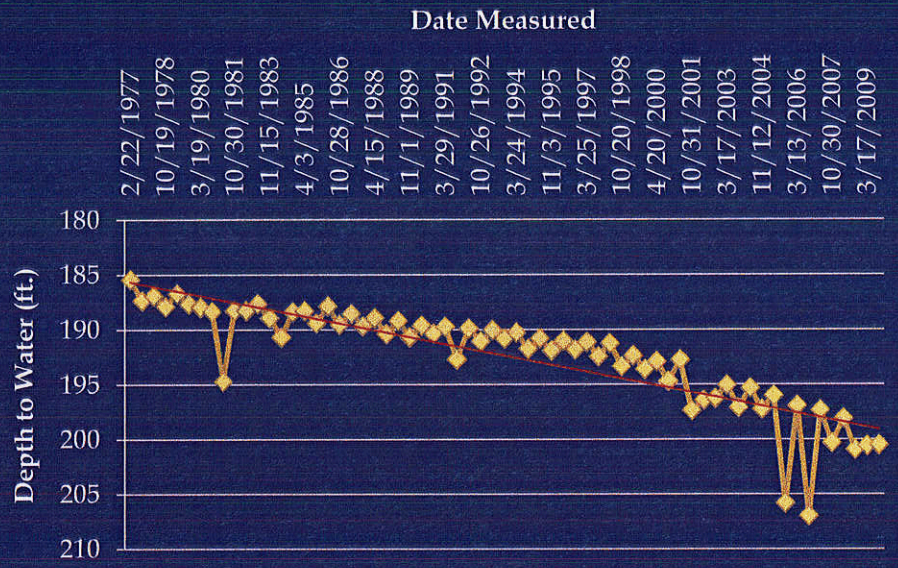
14N 57W 21CCA
5 South 1 East of Bushnell

14N 54W 22CA
4 South 1 West of Dix

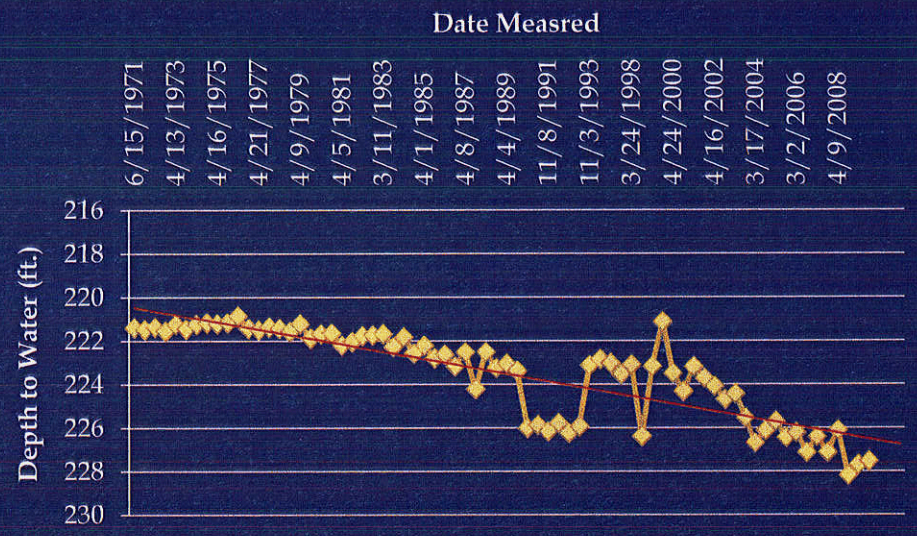



Cheyenne County Hydrograph Locations
Feet
4.61 - 11.15
3.23 - 4.60
2.12 - 3.22
1.21 - 2.11
0.42 - 1.20
0 - 0.41
0 - -1.67
-1.68 - -5.53
One Year Wells
15N 51W 6BA
16N 49W 19BBB
14N 52W 3CBA
14N 47W 28CB
13N 47W 32ADB
Potter
Sidney
Lodgepole

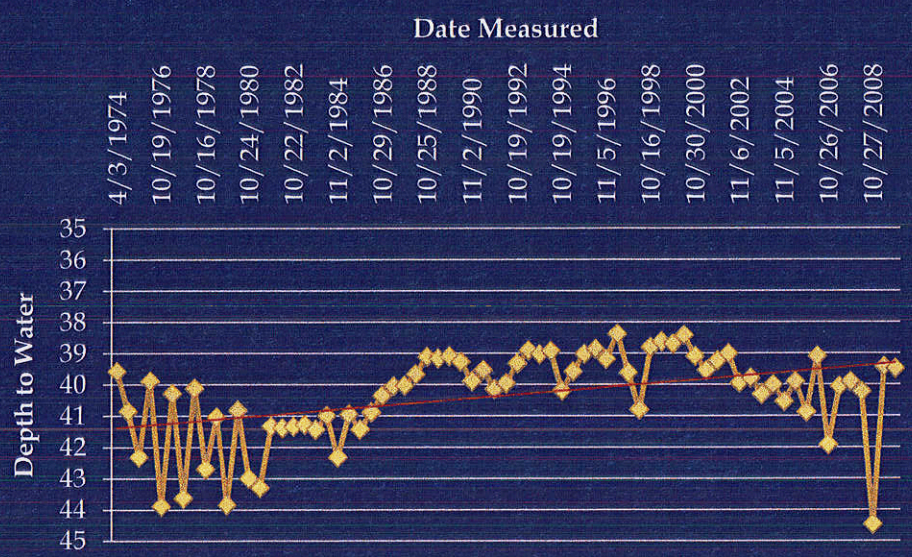
15N 51W 6BA
6 North 5 East of Potter



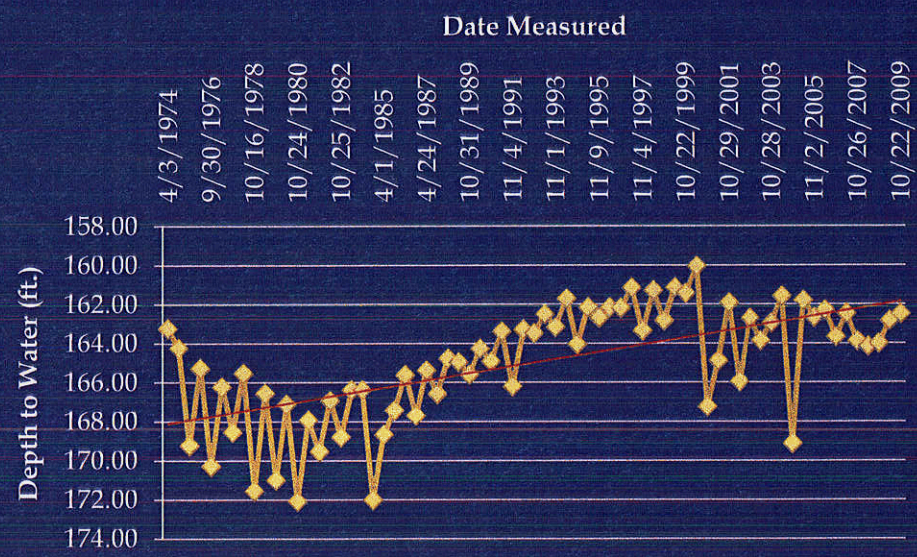
16N 49W 19BBB
Gurley Recorder
2 North 1 West of Gurley



15N 46W 18CCC
8 Miles North of Lodgepole

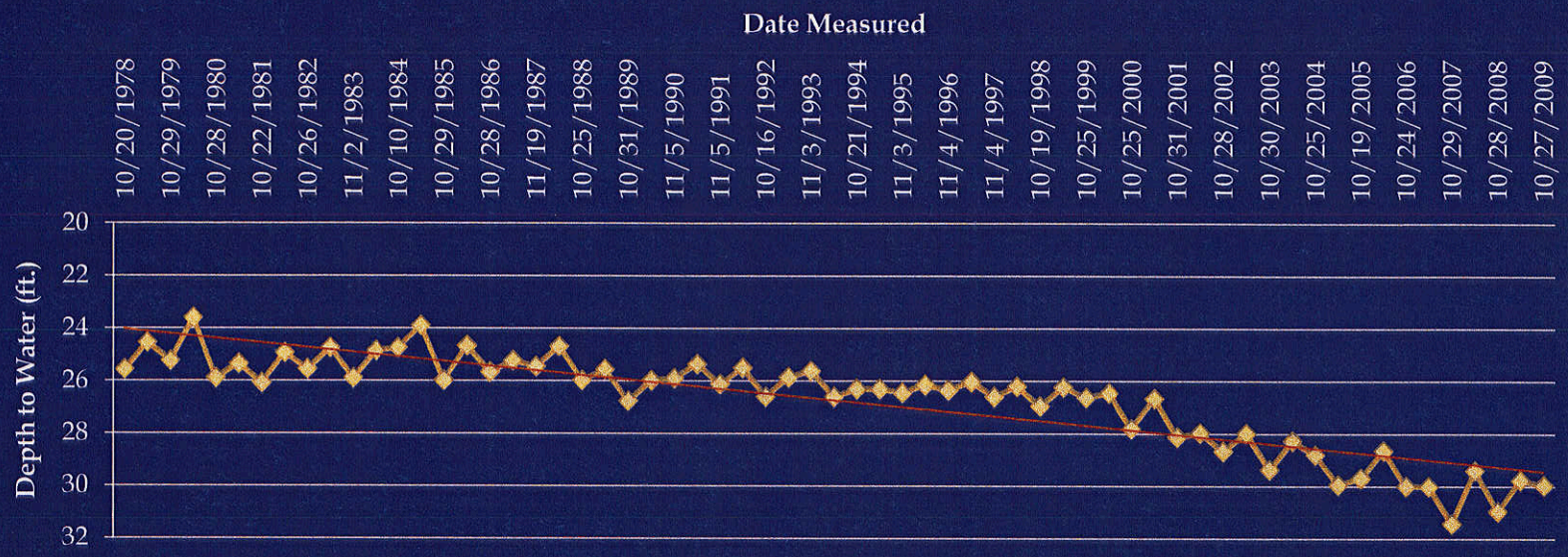


13N 47W 32ADB
6 South 4 West of Lodgepole



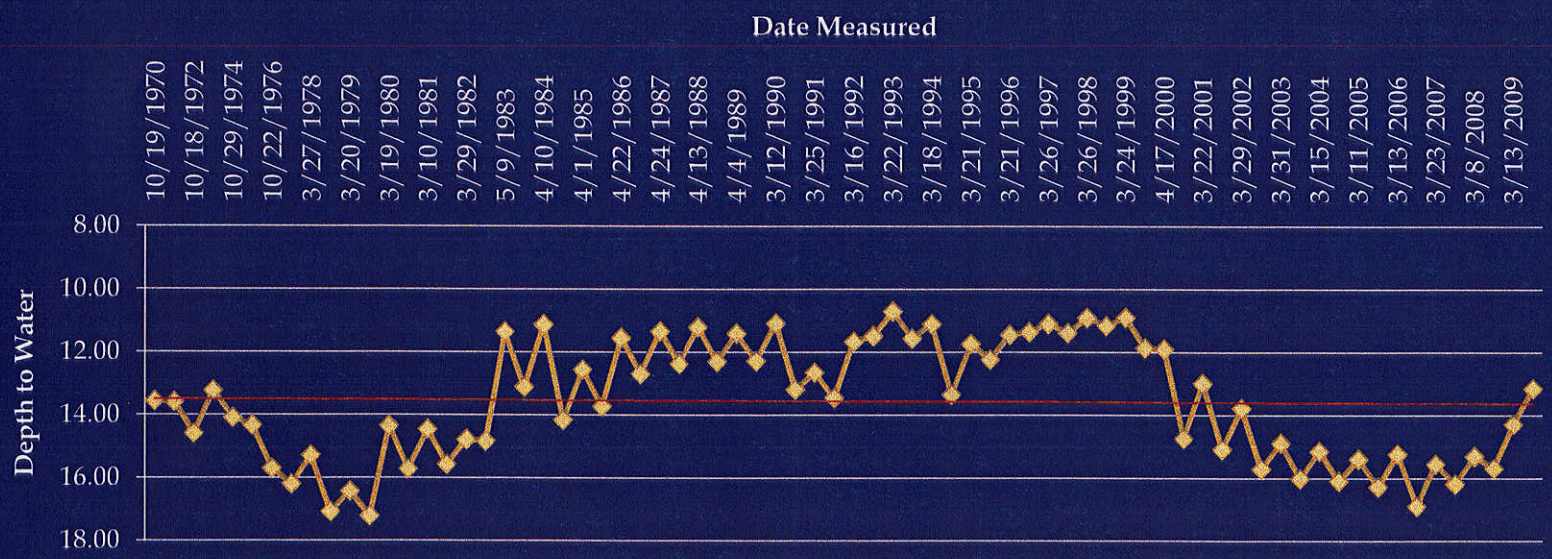
14N 52W 3CBA

2 East of Potter

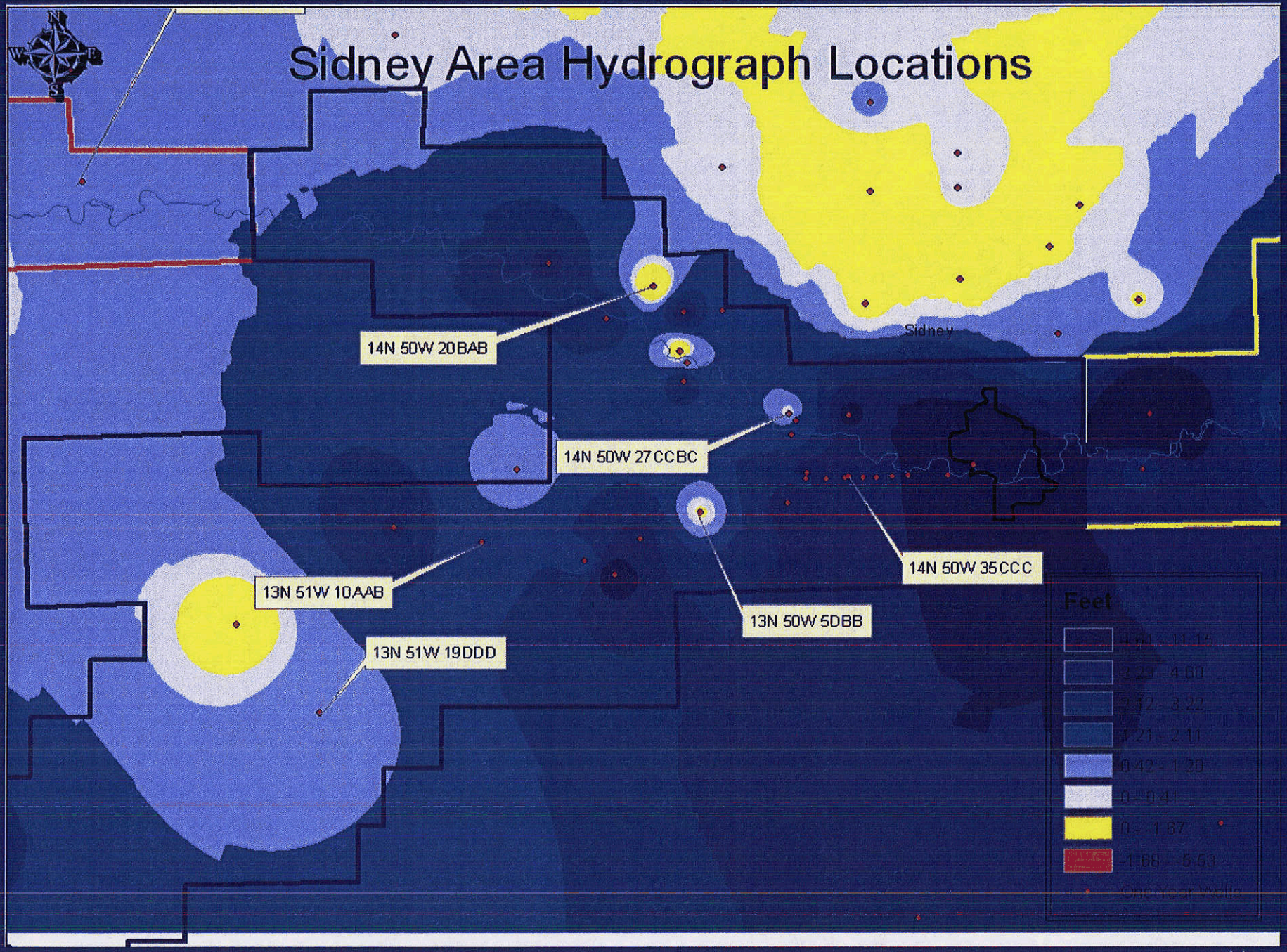


14N 47W 28CB

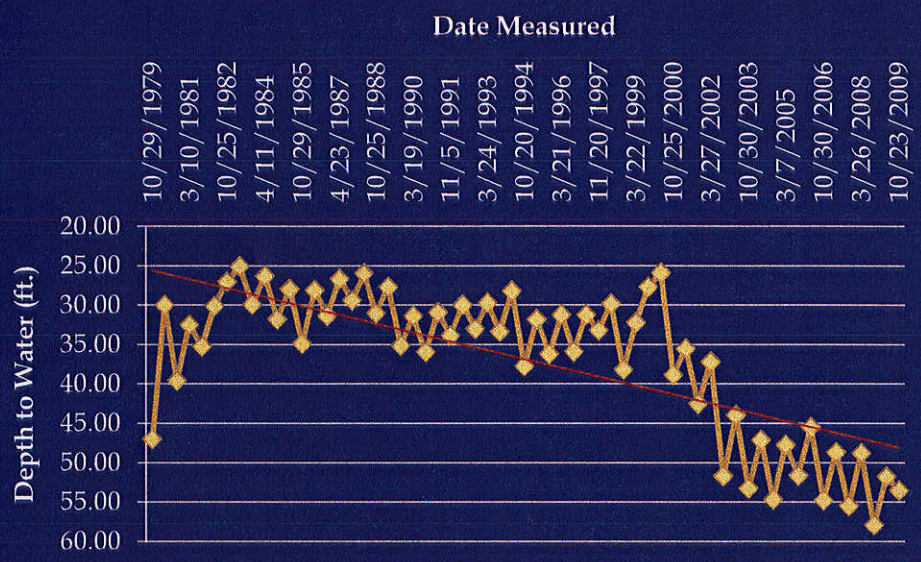
4 West of Lodgepole



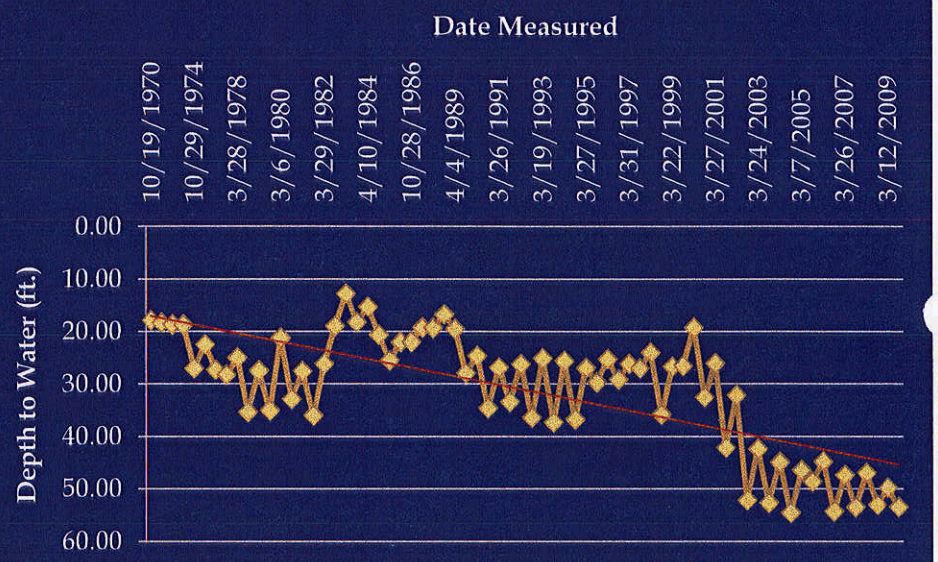
Sidney Area Hydrograph Locations



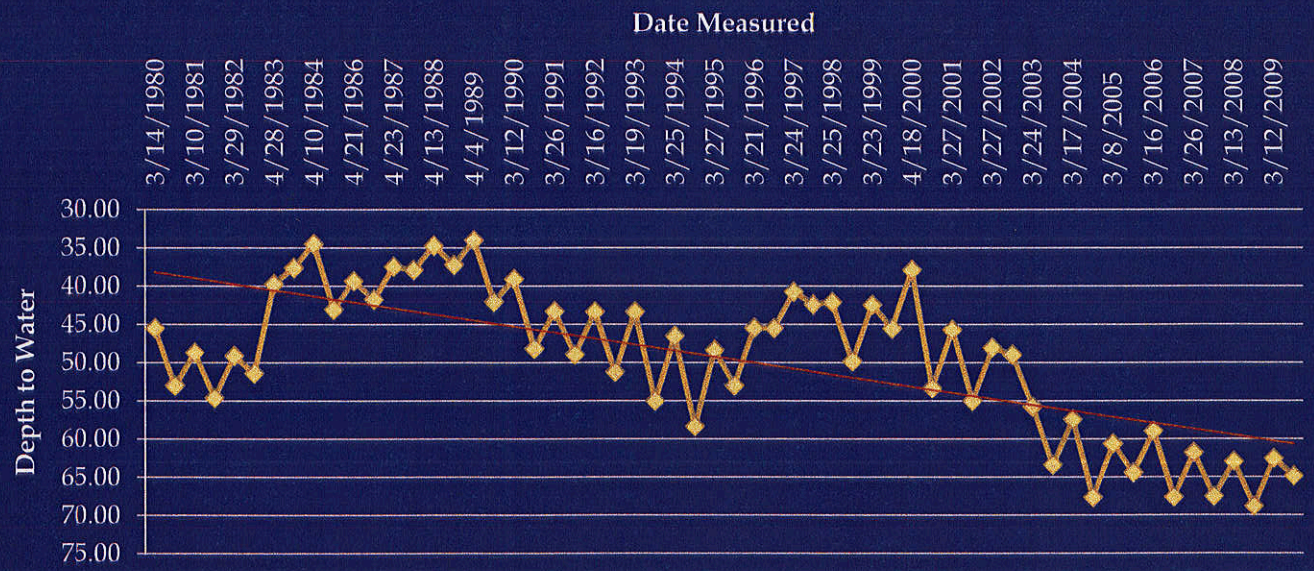
14N 50W 20BAB
5 West 2 North of Sidney



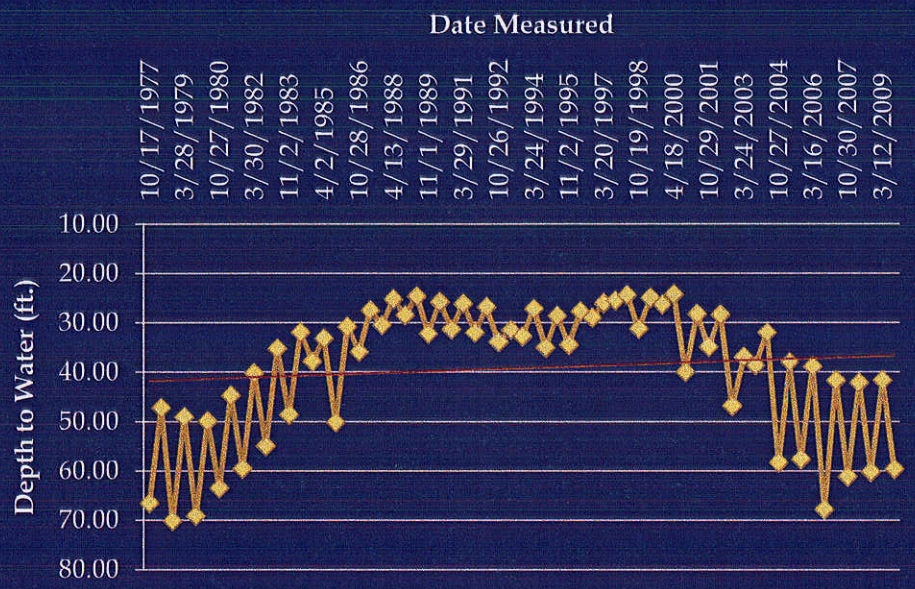
14N 50W 27CCBC
3 West of Sidney



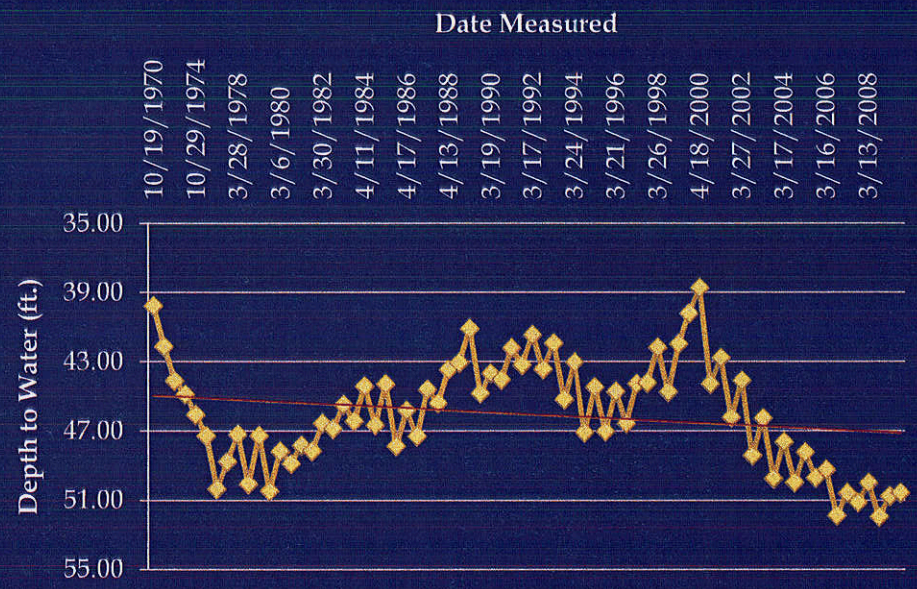
14N 50W 35CC
1.5 West of Sidney



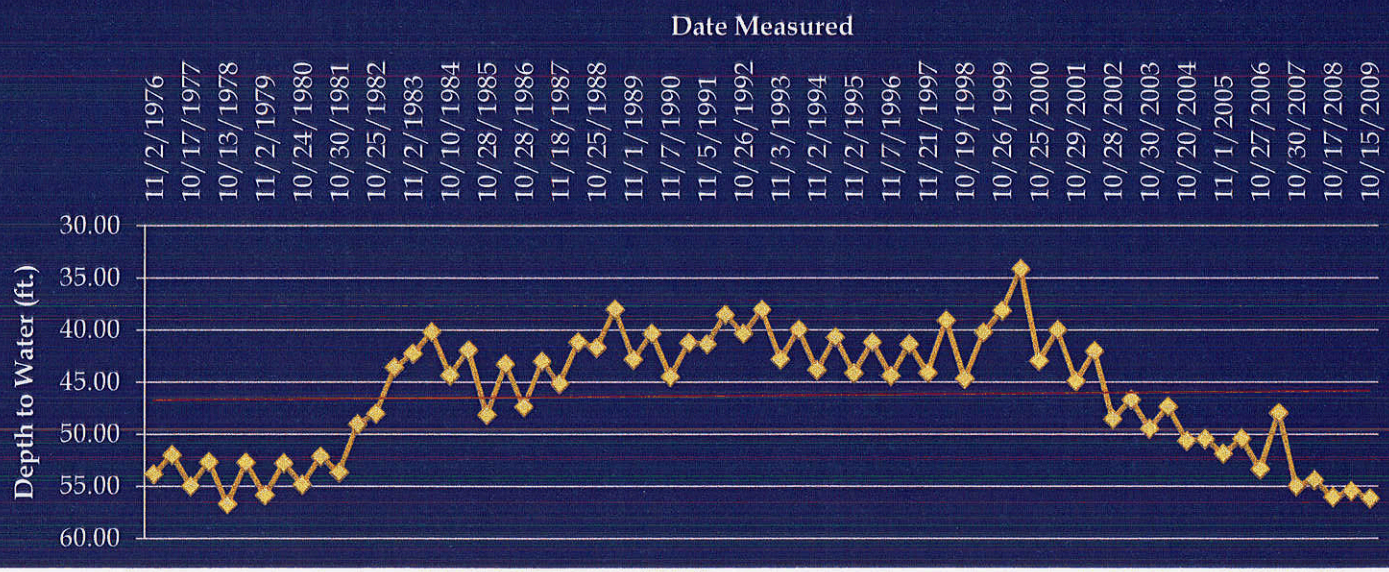
13N 51W 19DDD
4 South 11West of Sidney

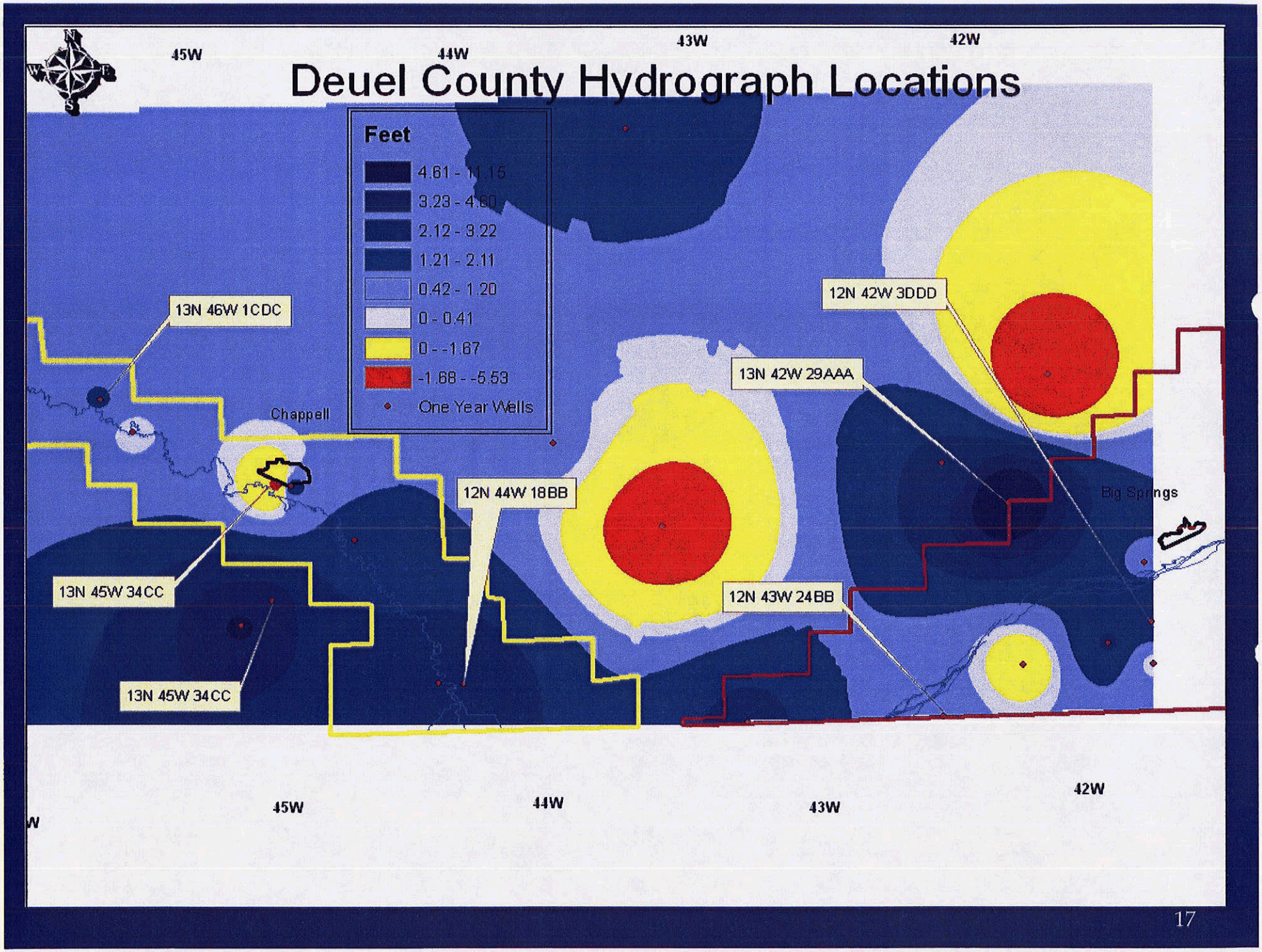


13N 51W 10AAB
1 South 8 West of Sidney

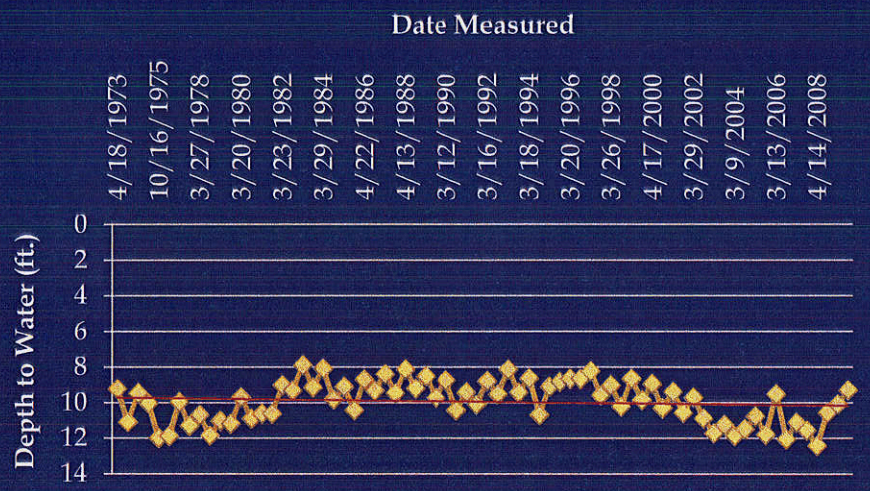


13N 50W 5DBB
4.5 West of Sidney

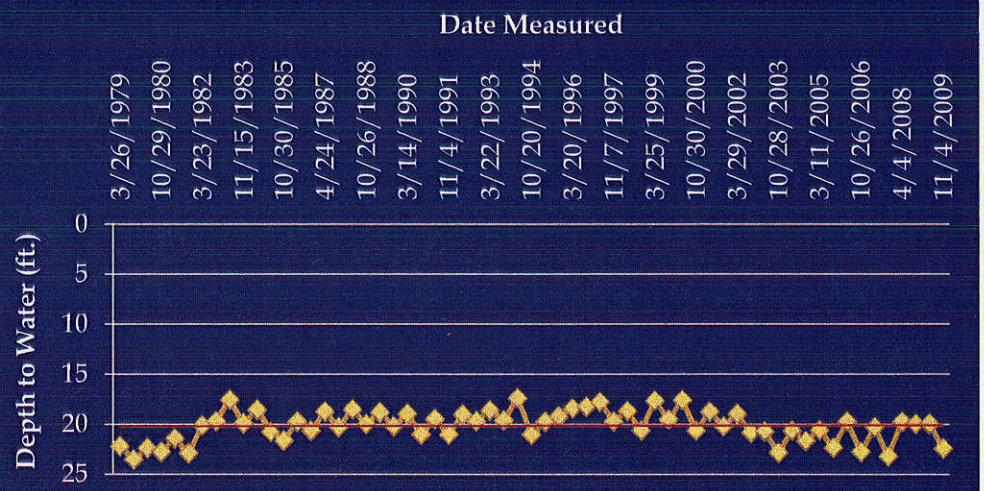



Deuel County Hydrograph Locations
45W
44W
43W
42W
Feet
4.61 - 11.15
3.23 - 4.60
2.12 - 3.22
1.21 - 2.11
0.42 - 1.20
0 - 0.41
0 - -1.67
-1.68 - -5.53
One Year Wells
13N 46W 1CDC
Chappell
13N 45W 34CC
13N 45W 34CC
12N 44W 18BB
13N 42W 29AAA
12N 42W 3DDD
12N 43W 24BB
Big Springs

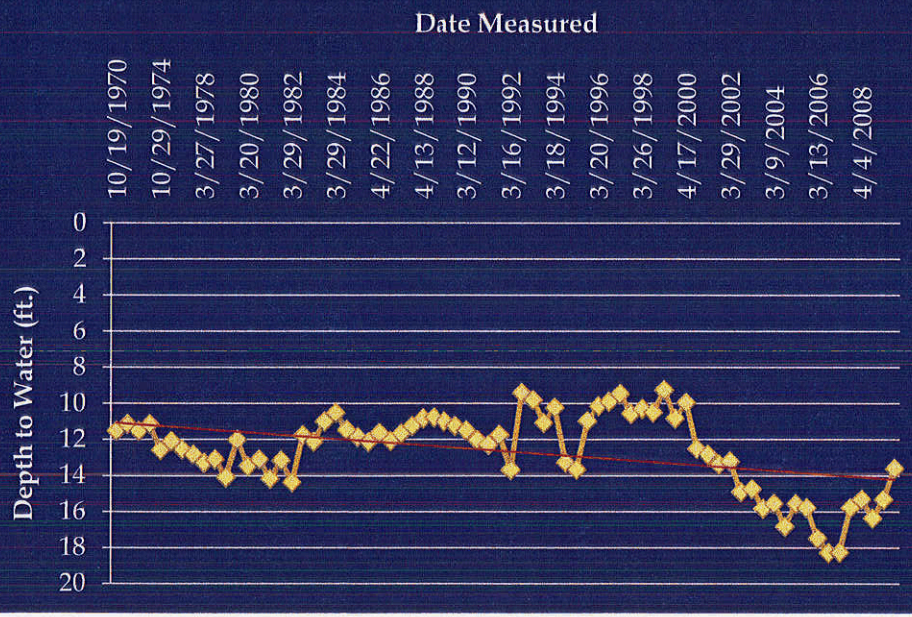
13N 46W 1CDC
2 North 4 West of Chappell



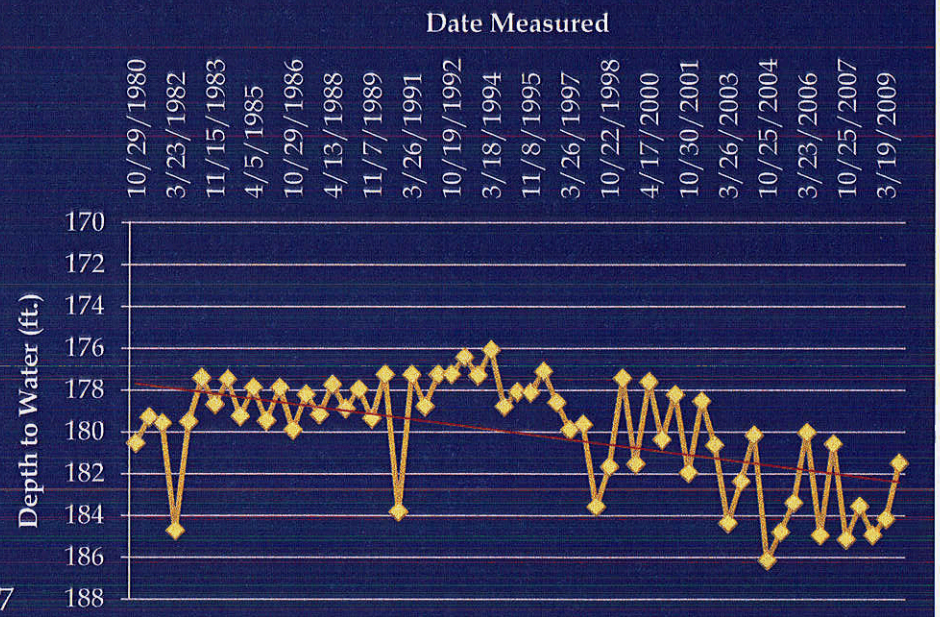
13N 45W 22BAB
in Chappell by viaduct



12N 44W 18BB
1 North of CO/NE State Line

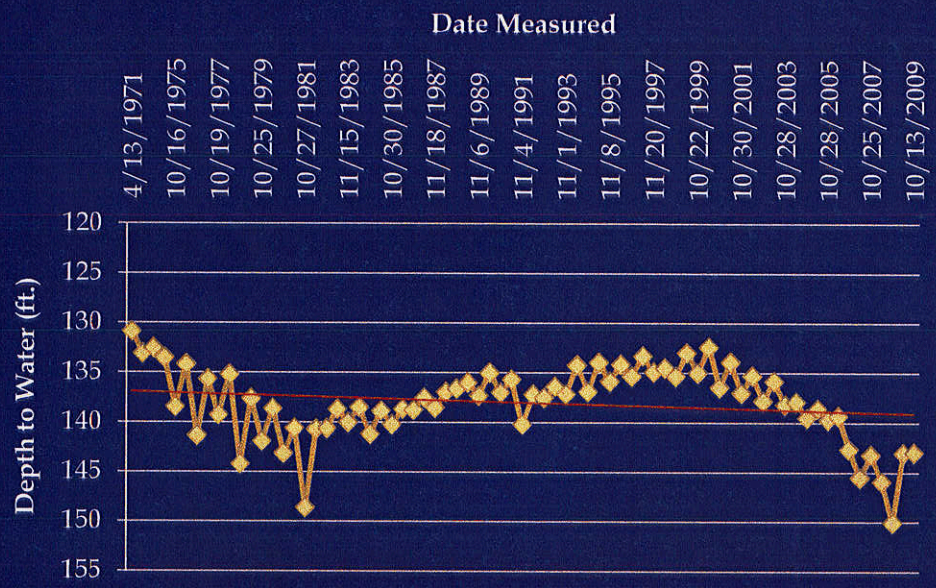


13N 45W 34CC
3 South of Chappell



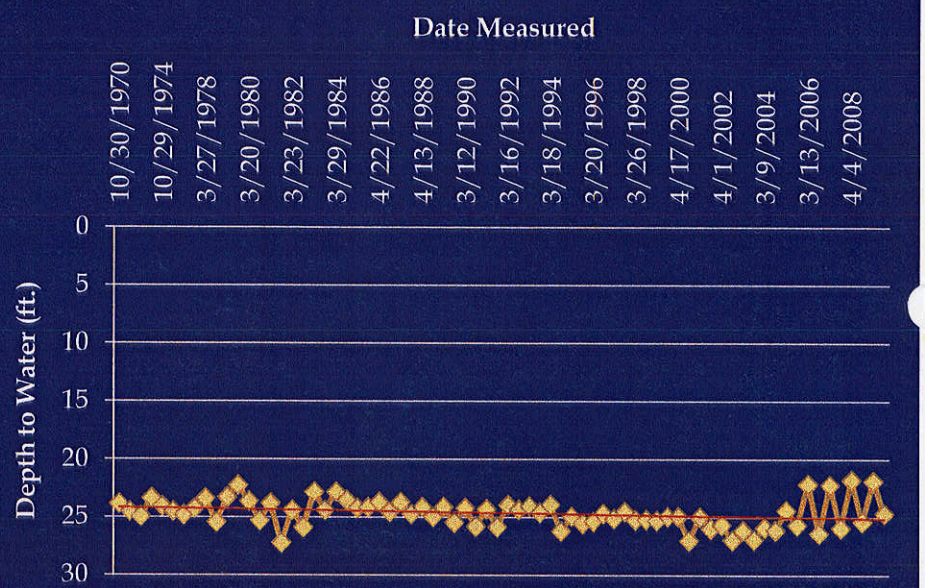
13N 42W 29AAA

4 West 1 North of Big Springs



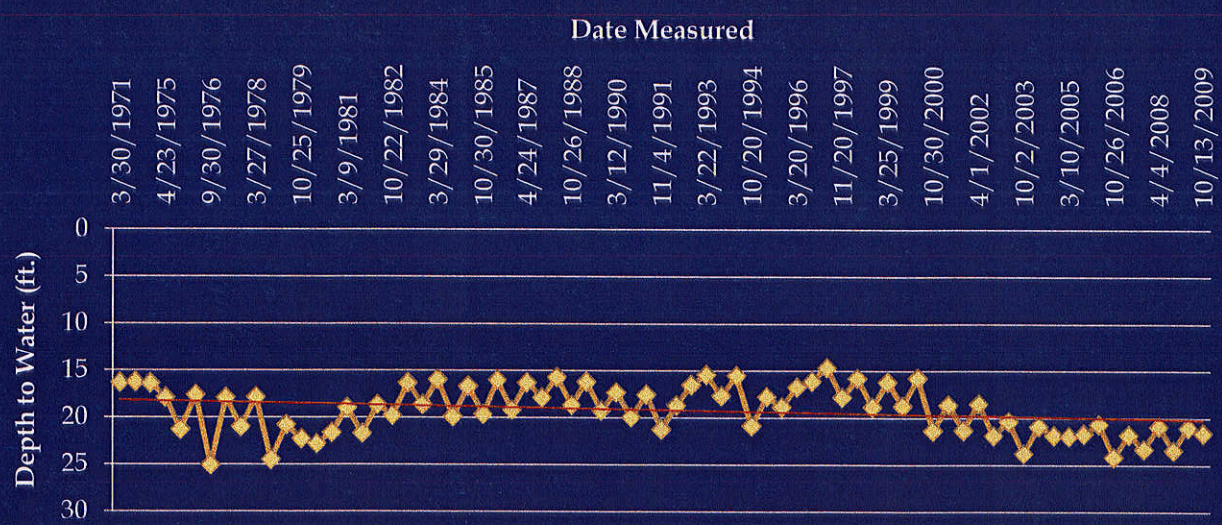
12N 43W 24BB

4 South 6 West of Big Springs



12N 42W 3DDD

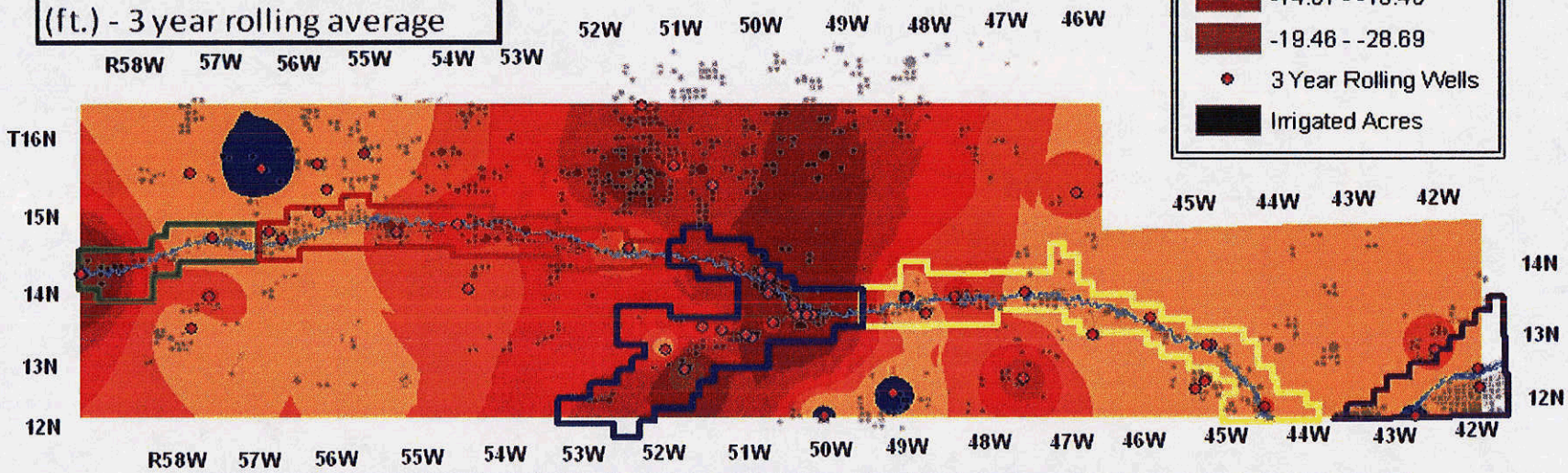
2 South 1 West of Big Springs



SOUTH PLATTE NATURAL RESOURCES DISTRICT

SPNRD 3 Year Rolling Averages

Average difference between 1988-1997 groundwater level averages and 2007-2009 groundwater level averages (ft.) - 3 year rolling average

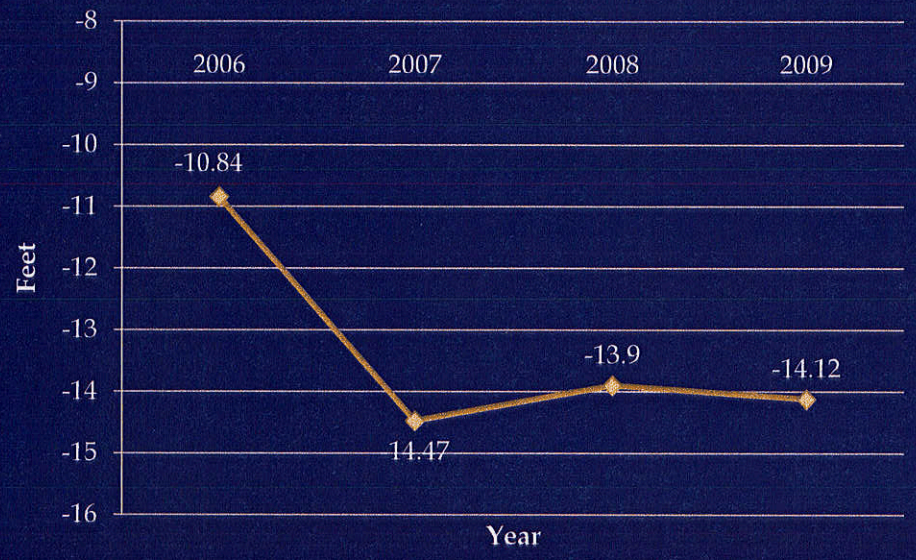


Subarea	# of Wells	3 Year Rolling Ave	Allocation
Pine Bluffs to Oliver	2	-14.12	14"/year, 42" over 3 years
Oliver to Buffalo Bend	6	-4.77	16"/year, 48" over 3 years
Buffalo Bend to Sidney	18	-15.72	14"/year, 42" over 3 years
Sidney to CO	8	-2.79	16"/year, 48" over 3 years
SPV	4	-2.89	20"/year, 80" over 4 years
Fully Appropriated	19	-4.71	20"/year, 80" over 4 years

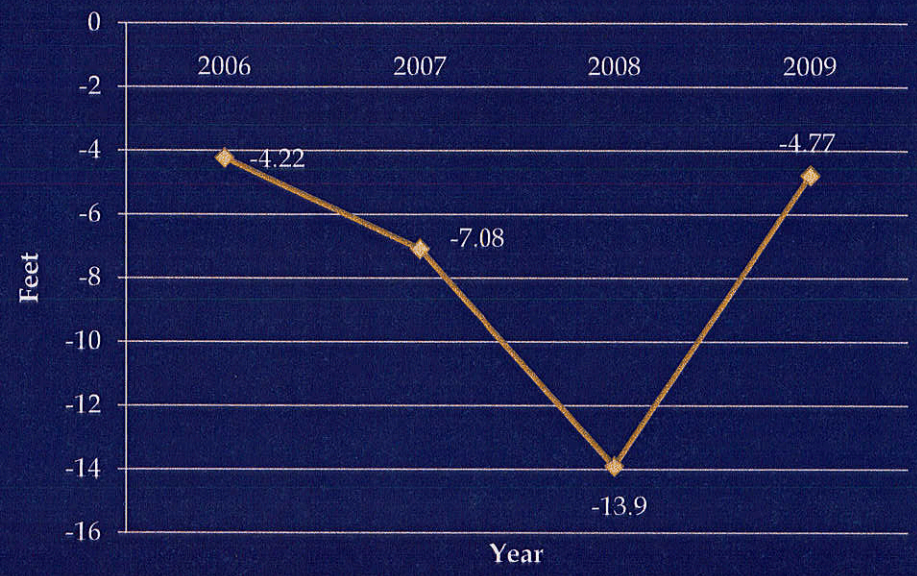
0 5 10 20 Miles

Comparison of Three Year Rolling Averages

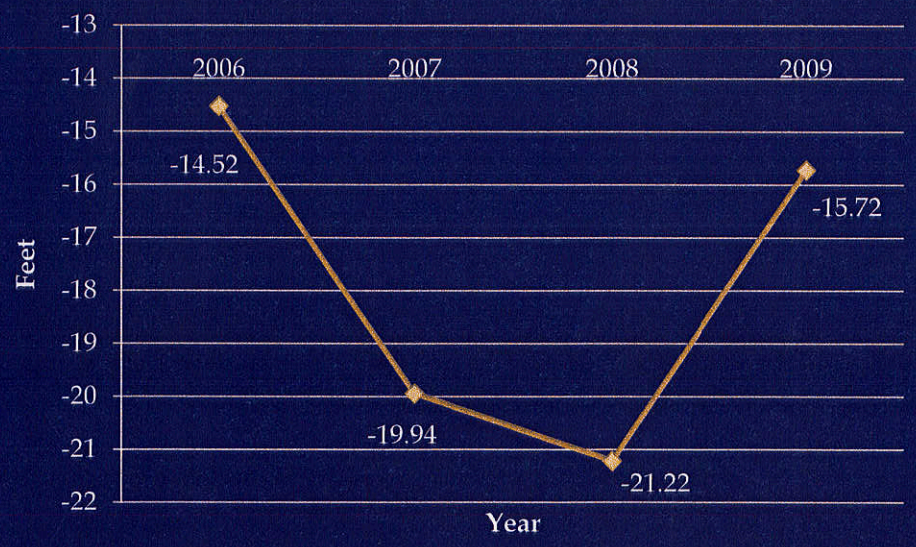
Pine Bluffs to Oliver Reservoir



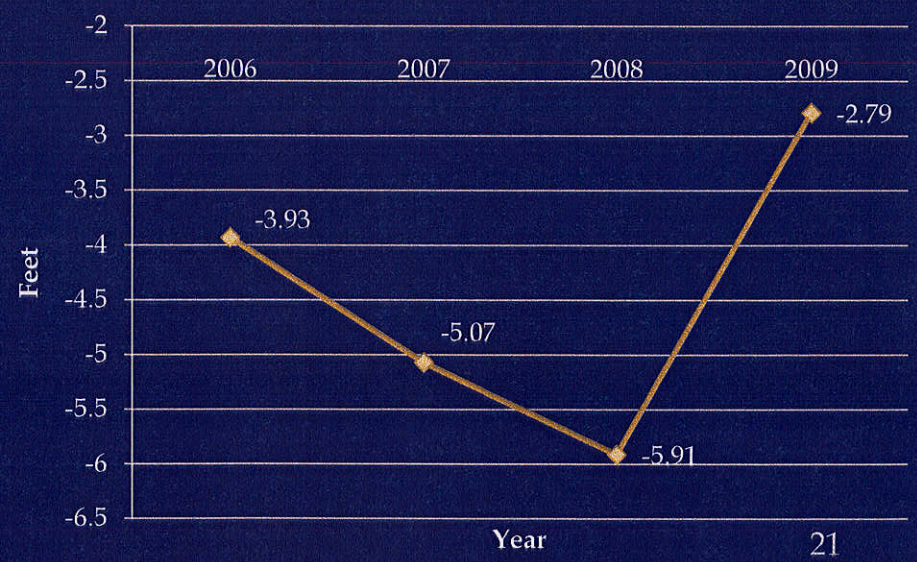
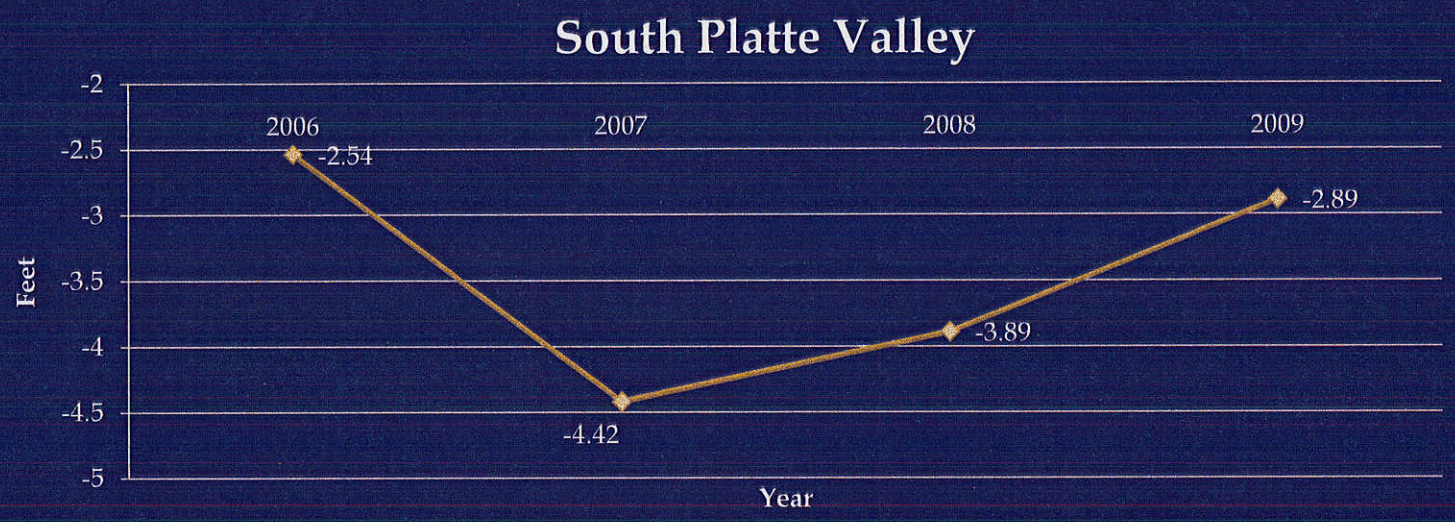
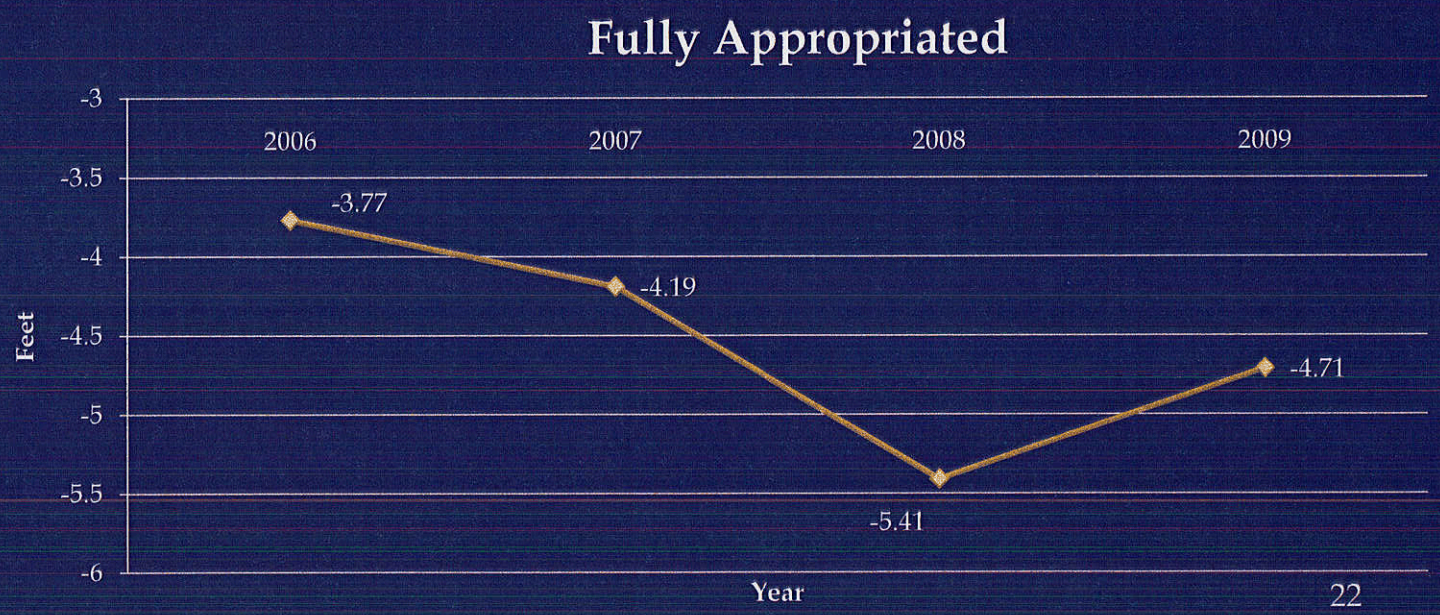
Oliver Reservoir to Buffalo Bend



Buffalo Bend to Sidney



Sidney to Colorado



Comparison of Three Year Rolling Averages