Middle Republican NRD Informational Meetings

Republican River Compact
Settlement Compliance
June 2004

1

Republican River Basin
Above Hardy, NE

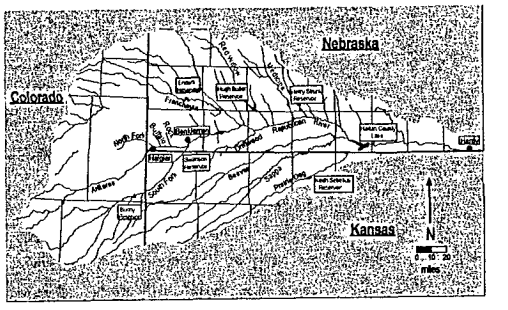
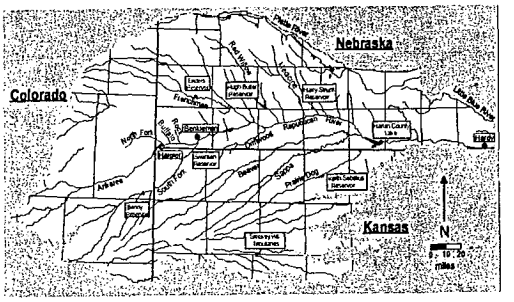


Figure 1

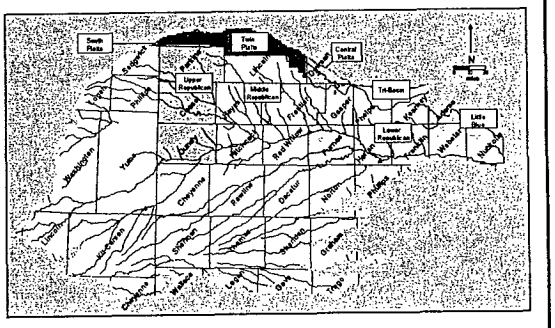
2

Republican River
Groundwater System



3

Counties and Basin NRDs



4

Well Measurements Levels
Spring 2003 to Spring 2004

	District-wide
# Wells Lower	111
# Wells High	9
# Wells Unchanged	0
# Wells Unmeasured	12
Total Wells	132
Well Most Decline	-6.92
Well Most Increase	2.49
Ave Change 1 year	-0.9628
Ave Decline 1972	-0.1663

5

Republican River Settlement

- Republican River Compact Signed 1943
  - Nebraska 49%
  - Kansas 40%
  - Colorado 11%
- Out-Of-Court Settlement 12/16/02
- Five-Year Running Ave., 2003-2007
- Water Short Years
  - Less Than 119,00 ac ft, K/N Bostwick

6

Republican River Settlement

- Determining Compliance
  - Runoff
  - Baseflow
- Consumptive Use
- Drought Impacts

7

Republican River Settlement

- Ground/Surface Water Use Conflicts (LB108)
  - Ground Water Model
- Joint Action Plan – NRDs/DNR
  - LB 962
- Rules and Regulations Established Are Unique to Individual NRDs

8

GROUND WATER MANAGEMENT AREA

Effective July 1, 1998
Revised in 1999, 2000, & 2003

9

Current Rules & Regulations

Regulated Well – A well that is designed and constructed to pump more than 50 gallons per minute.

Well permits – Required for all new or replacement regulated wells except;

- Test holes
- Dewatering wells used less than 90 days
- Wells 50 gpm and less

10

Current Rules & Regulations

Well Spacing

- 1320 feet between regulated wells for all new wells regardless of ownership
- Replacement wells may be placed within 100 feet of the well they replace

11

Current Rules & Regulations

Flow Meters – All regulated wells must be metered by December 31, 2004

- Alluvial Area – Completed by 2000
- NE ¼ by December 31, 2001
- SE ¼ by December 31, 2002
- SW ¼ by December 31, 2003
- NW ¼ by December 31, 2004

12

Current Rules & Regulations

Flow meters must meet district specifications

- Cost-share assistance is available

New regulated wells are required to install meters prior to use

Waivers for unused, inactive, seldom used or wells less than 250 gpm

13

Current Rules & Regulations

Reports

- All users with meters installed are required to report water use at the end of the year
- Forms provided by the district

14

Temporary Suspension

- Adopted June 11, 2002
- Suspends the drilling of new wells

15

2003 Revisions

Certification

- Summer of 2003 all acres irrigated by ground water were to be certified by the landowner
  - No new uses after November 2003
  - Cap on irrigated acres at 320,000
  - Currently certified 311,000
- Uses from all other regulated wells certified to the board by October 2004

16

District Information

- **3,200 registered wells**
- **311,000 total irrigated acres**
  63,000 alluvial acres
- **Surface water irrigated acres 44,278**
  Commingled 25,000?

17

DNR Data 1998-2002

- **Average water pumped 309,479 ac ft**
- **Average irrigated acres 290,191**
- **Percentage share of depletions**
  - Upper Republican NRD 40%
  - Middle Republican NRD 29%
  - Lower Republican NRD 25%
  - Tri-Basin NRD 6%

18

Proposed Revisions

- **Joint Action Plan (LB 108)**
  - Cooperative Plan with Department of Natural Resources
  - NRD develops ground water plan
  - DNR develops surface water plan
  - Rules based in part on negotiated settlement with Kansas
  - Determination and hearing by DNR June 2003

19

Proposed Revisions

- **Integrated Management Plan (LB 962)**
  - Cooperative Plan with Department of Natural Resources
  - NRD develops ground water plan
  - DNR develops surface water plan
  - Rules based in part on negotiated settlement with Kansas
  - Determination by DNR effective July 16, 2004

20

Proposed Revisions

Proposed Plan A

- 10 % reduction in irrigated acres
- Allocation of 15 inches per year
- Incentive program to temporarily or permanently retire irrigated acres
- Additional reductions in "water short years"

21

Proposed Revisions

Proposed Plan A Allocations

- 45 inches over a 3 year period
- Reserve limited to 6"
- No more than 3" overuse in a normal year
- No overuse in water short year
- 10% reduction in irrigated acres
- Additional 5% reduction in water short year

22

Proposed Revisions

Proposed Plan B

- No reduction in irrigated acres
- 10 inch base allocation (30 inches over 3 years)
- Able to buy additional inches
- Incentive program

23

Proposed Revisions

Proposed Plan B Allocations

- No over use of base allocation water in water-short years
- Maximum use in normal year 14"
- Maximum reserve - 6"
- Penalties for over use

24

Proposed Revisions

Proposed Plan B Water Purchasing

- First 10" (base allocation) no charge
- Purchase 4" in water short year
- Purchase 6" in normal year
- Fees used to fund incentive programs for permanent or temporary retirement of acres

25

Proposed Revisions

- **Municipal**
  - Based on population and area of community
  - Industrial use may be credited to total use and accounted for as an industrial allocation
  - Formula allows for new development
- **Livestock Operation Uses**
  - Table with maximum reasonable quantities
- **Industrial Uses**
  - Industrial uses must be certified

26

Other Probable Rules

- **Moratorium**
  - Permanent
  - Exceptions: Replacement wells, backup wells, municipal wells
- **Transfers – Temporary and Permanent**
  - A portion or all of existing allocation could be transferred
  - Registration of a well could be transferred to another use for the same or different use

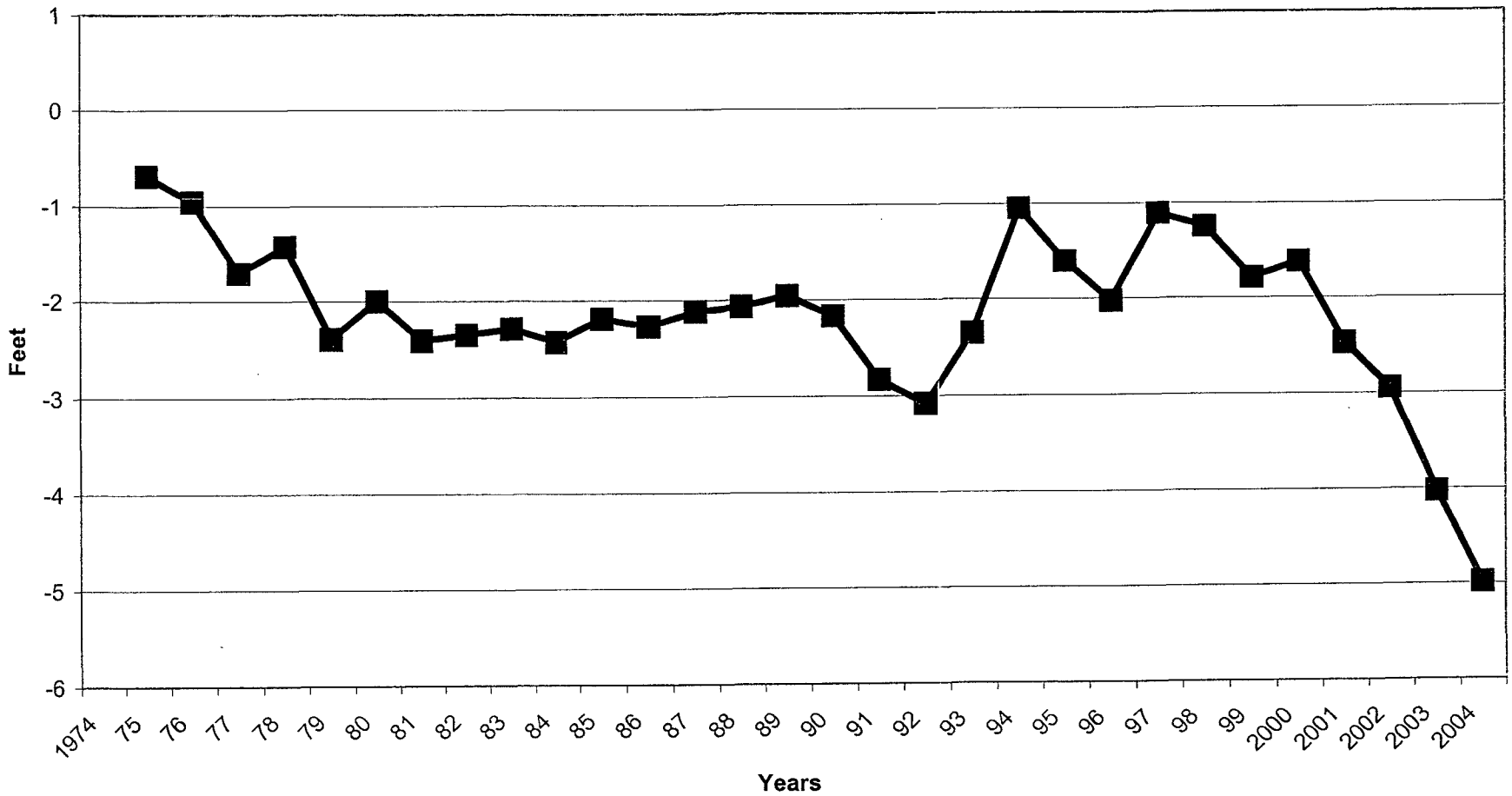
27

Other Probable Rules

- **Meter Program**
  - NRD reads and maintains meters
  - Service program provided by NRD
- **Replacement Wells**
  - Still allowed but limited to historical use of the well being replaced

28

Cumulative Change
Spring Measurements
2004

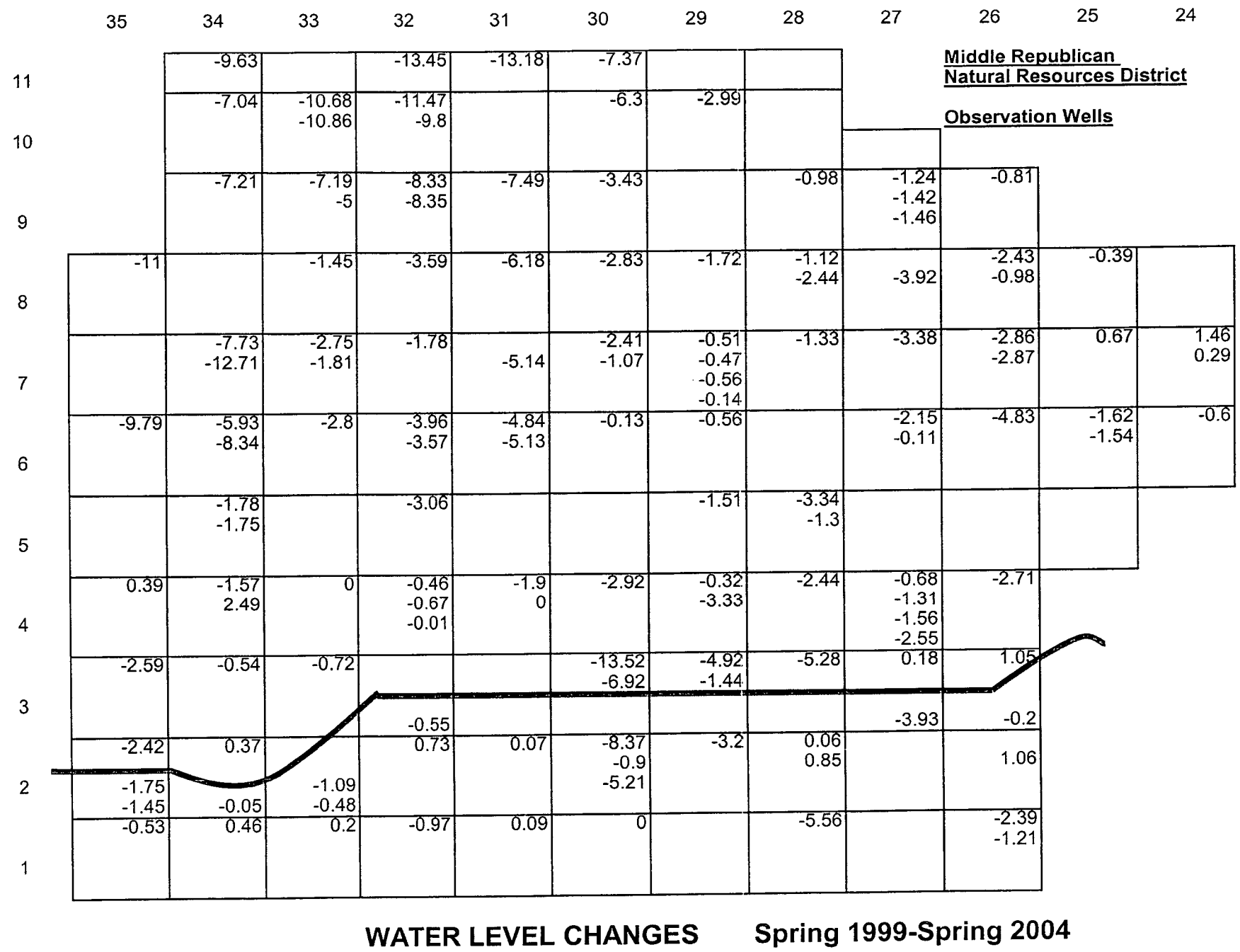


MIDDLE REPUBLICAN NRD

GROUNDWATER MONITORING PROGRAM

Summary Comparison of Spring 2003 to Spring 2004

	FRONTIER	HAYES	HITCHCOCK	LINCOLN	RED WILLOW	NRD
No. Wells lower than Spring2004	29	21	17	22	22	111
No. Wells higher than Spring2004	3	0	4	0	2	9
No. Wells not changed from Spring2004	0	0	0	0	0	0
No. Well not measured	2	0	6	1	3	12
Total No. of Wells in Monitoring Program	34	21	27	23	27	132
Greatest decline in 1 well	-1.53	-2.93	-2.5	-6.47	-6.92	-6.92
Greatest rise in 1 well	1.93	0.16	2.49	0.08	0.54	2.49
Average Water Level Change Spring 2004	-0.53294	-1.23286	-0.48667	-2.02087	-0.86889	-0.9628
Average Annual Decline Since 1974						-0.1663



WATER LEVEL CHANGES Spring 1999-Spring 2004