

Nebraska Water Myths

The Falsehoods, Half-Truths & Just Plain LIES

That Threaten the economic future of Platte Valley Agriculture
&
The entire state of Nebraska

by

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Background

This paper documents some of the summary results of an effort by the owner of surface and groundwater irrigated farm land in Dawson County to gather the truth about water issues in the Platte River Valley of Nebraska. The motivation was to understand how best to ensure an adequate water supply for the family farm and understand those things that might affect my ability to ensure that an adequate water supply will be available.

This has been a search for the truth.

The truth has been found.

The primary truth is that Nebraska landowners, producers, citizens, and others are being lied to. The truth is being covered up by those who are deceiving the entire state of Nebraska. These individuals are causing the future of Nebraska agriculture and the future Nebraska economy to be harmed.

The truth is that the manner in which water policy is being currently established in the state of Nebraska is not based on sound science, engineering, and facts that can be used to protect and enhance the future of Nebraska agriculture. It is based on deceptions, falsehoods, and just plain LIES.

This has been a story of evasiveness, deceptions, avoidance, public verbal personal attacks by an elected official, and just plain LIES.

This is a story of a very bad change in the culture of a state that was made great by the diligent and honest efforts of generations of pioneering farmers who worked hard, spoke the truth, and took risk in improving the land they respected and developing the irrigation resources that serve as the lifeblood of Nebraska. They changed the state from being considered a great American Desert to a place that fed the world.

This once honest state is now in the process of being destroyed by bureaucrats, politicians, environmentalists, and others who refuse to let good science, sound engineering, truthfulness, and facts get in the way of their quest for power. They are masters of deception and just plain LIES.

Read on to see the major MYTHS that have been created by this bad change in Nebraska culture.

Myth # 1. The Platte River flows are being depleted by groundwater development and Irrigation pumping.

Fact # 1: In, for example, the ACOHYST area@, since 1941 the number of irrigation wells has increased from less than 1,000 [my farm=s original well is in that count] to more than 47,000. **This is an increase of more than 4600%.**

Fact # 2: At the same time, the average flows at Grand Island have **INCREASED** over the long term average flow during the last 30 years.

The enclosed chart showing the plot of irrigation wells and river flows at Grand Island clearly shows these facts. The claim that river flows are being depleted by irrigation well use is clearly a myth. With this large an increase in wells used in the Platte Valley, there should be at least some indication of decline in river flows, IF there were a cause-effect relationship. There is clearly not.

Fact # 3: The Central Platte NRD Staff Hydrologist who serves as Chairman of the COHYST Technical Committee has stated that there is no data that shows correlation between groundwater use and river flows. In fact, here is a direct quote of what he stated to me in writing on October 17, 2003, in response to a question about that: AThere are many reasons why river flows fluctuate over time but the primary Acause@is weather.@

Fact # 4: At an Oct. 23, 2003 meeting of the CPNRD Water Resources Committee which I attended and participated in, here is what that staff hydrologist=s response was to the stated question. This is extracted directly from the written transcript of that meeting:

A Either Ron Klein or Don Adams B Duane, where=s the data that really shows that ground water pumping is significantly impacted by flows? Where is the data?@

ADuane B Sir, let me start out. There=s aYI kind of answered that later, butYYou will not see any trends in the flows data that showed significance of how ground water pumpings= did that.@

Fact # 5: The often expressed claims that the Ariver is drying up at Grand Island@is also simply not true. The enclosed plot, with the supporting tabular data basis, of the number of Azero-flow days@at Grand Island, is taken directly from public USGS data for the Grand Island gaging station. It is notable that for 22 years, beginning in 1979, there were NO recorded zero-flow days.

It is my conclusion that those who are making these claims are completely ignoring this data. Even DNR, which should certainly be aware of them, seems to Aconveniently@be disregarding these facts while making statements to other organizations and individuals. To my knowledge, they have never presented actual data to support their claims. **I believe it is because it does not exist - and they know it!**

Conclusion re Myth # 1: AMyth@is the correct term. Credible evidence clearly refutes the claim.

Myth # 2: The increased use of irrigation wells is lowering groundwater levels and depleting the Ogallala Aquifer.

Fact # 6: On a short-term basis - such as year-to-year, the aquifer levels have been drawn down. That is reflected in data on the enclosed chart of water level which was measured in the original well on my own farm over a 70 year period.

Fact # 7: On a long-term basis, the data shown on the enclosed chart shows what really happens. As drought cycles occur, the water levels do decline for a period of time. But, as those drought cycles end, the aquifer is recharged. On the long-term and on an average basis, the levels have simply varied around the long-term average, reflecting the dry and wet cycles of nature.

Myth # 2 is clearly just that. And, this data warrants some discussion.

This cycle of nature is clearly evident from our original well, which was drilled sometime prior to 1932. During the 1930s drought, the level dropped. It recovered in the 1940s, dropped again during the 1950s drought, recovered in the early 1960s, dropped again during the late 1960s and through the 1970s. But, beginning in the early 1980s, as the cycle of nature reversed, the aquifer was again recharged, and the water levels in the aquifer were restored.

Various organizations, such as Central Platte NRD, have been using short-term declines in aquifer levels to justify drilling moratoriums. They produce and disseminate plots showing declines in the aquifer. They act without looking at the true picture - which is far longer term than their data shows. They do not reflect the reality of nature's system which was created to, and in fact does over a long-term period, allow use the aquifer as a storage reservoir in dry periods, and recharges again when more wet periods return. This is what the creator had in mind. It was intended to be used by innovative people to benefit and thrive from it. That has happened in Nebraska - at least until now.

The organizations and individuals who are looking at **short-term** data to make decisions, which is what is going on, are allowing themselves to be misled. **And, they are then proceeding to mislead others by not properly considering the reality of the long-term data.**

This misleading use of the facts is causing serious - perhaps fatal - long-term problems for irrigated agriculture in Nebraska, and with it the future of the state economy. Unlike nature, once political decisions preventing further use of this natural resource, are solidified into law, it will never be reversed. **The harm will be exceptionally serious - and irreversible.**

It is time for Nebraskans to stand up and demand that policymakers start dealing with facts - not myths. LB962 is just one of those items which must be stopped. And, those that have been misleading the state of Nebraska and its hardworking farmers, landowners, and other citizens need to be dealt with appropriately and decisively. **This must absolutely be stopped before it is too late.**

Myth # 3: The COHYST project will be the key to successful management of the water resources in the Platte River Valley of Nebraska.

Unfortunately, this is one more myth which needs to be dispelled. To explain why I have reached the conclusions I have is very difficult. The reasons are complex, and based on my nearly 35 years of professional engineering experience. During my career I have been involved in solving a uniquely diverse set of practical engineering and management problems. My basic approach has been to apply logical reasoning, fundamental engineering and physical principles and mathematical analysis - where applicable - to problems, address them practically, and work diligently to implement practical solutions. As a result, I have been fortunate to be recognized on numerous occasions by employers, customers, clients, and peers for my work. This has often been in areas that were not necessarily in my formal educational engineering specialties. Such is the case with COHYST. With all modesty, I must say that my conclusions on the project are correct, as I am clearly qualified to reach my conclusions based upon my experience track record of performance on difficult projects.

The problems with this project are as complex as the goals it supposedly has set out to achieve. **My summary conclusion is that this project is not being managed or performed in a sound engineering fashion. It is being driven by politics, not sound science and engineering.** It is being approached as an academic exercise without normally expected proper controls to insure that the results are correct, and that decisions affecting landowners and producers will be based on sound science and engineering with proper practical evaluation of model results that conclusively confirm the correctness of those results.

Let me briefly explain how I came to this conclusion. Then I will itemize the summary problems that exist and certain specific recommendations which I have made that might allow correction of those problems.

Nearly two years ago, I began to address concerns about insuring an adequate water supply for our land. I began considering replacing the registered well on our property in order to supplement or replace the surface water supply during the drought and associated concerns about availability of river water.

In the course of doing so, I began investigating COHYST, as it appeared to be a large engineering challenge. I started attending meetings on it, including one incorrectly portrayed as a demonstration, and was literally stonewalled by some of the technical people involved in the project. So I began looking for information and data of my own when I could not get consistent and logical answers about the project status from sponsors and partners of the COHYST effort.

In my 35 years of experience on projects that have been in various states of success, this one is unique. I have encountered inconsistencies in answers from members of the project team, purely evasive actions in response to questions about things that are normally basic considerations on any engineering project, refusal to answer questions, deceptions, and other actions which frankly can only be considered misrepresentations, if not pure and simple lies. I have never ever seen such a poorly managed and inappropriate situation - particularly when it affects the public interest as this project clearly does.

I will first briefly detail the specific items I am concerned about. Later, I will detail my specific recommendations on how these need to be addressed.

1. After FIVE (5) years of effort and consuming at least \$7Million, there is NO specific definition of why the project is necessary based on sound scientific proof there is depletion of river flows due to groundwater development. In fact, credible data shows that is NOT the case.
2. There is NO specific definition of exactly what the COHYST model will be expected to do, how well it will work, exactly how it will be used, and exactly how discrepancies between model predictions and field results will be resolved.
3. There is NO adequately defined, proven, and demonstrated practical test plan to verify that the model results match actual physical field test results.
4. There is NO adequately defined plan to resolve discrepancies between the COHYST predictions and actual results that will vary due to aquifer variations. COHYST representatives have said [June 26, 2003 - Gary Lewis, at CPNRD Water Resources Committee meeting] >Y if the farmer believes the model is wrong, the farmer can appeal a regulatory decision and the farmer can prove the model wrong Y= **This is the wrong answer.** The farmer should not have to essentially spend the value of his land to prove a flawed model to be wrong, which is what this would essentially require.
5. There is not an adequate technically based set of criteria defined for when COHYST tasks are complete, because the requirements for what it is to do, how well, and how it will be used are not defined. The only criteria is AY the technical committee will decide.@ The problem is the Atechnical committee@ is NOT truly technical. While its members may have degrees in technical disciplines, they are serving in roles that causes one to logically conclude that it consists primarily of bureaucrats, environmentalists, and politicians who are actually there to serve their POLITICAL interests.
6. The regional model concept is completely inadequate because of localized aquifer variations that are well known to occur. In fact, on my own land, a well was drilled twice, approximately 700 ft apart. The geological structure is completely different. This is the kind of variation to be expected in many areas of the valley, as any well driller will tell you. As a result the Aregional model@ concept is completely flawed.
7. The project is NOT being conducted as a sound engineering project affecting the future livelihood of farmers. Instead, it is conducted as an **ACADEMIC EXERCISE**. The proof of this fact is the completely inadequate definition, as described above, for why the project is necessary, what it will do, how well it will work, or how it will be proven in the field.
8. The CPNRD Board and staff are simply not prepared by education, training, or experience to manage or technically execute such a complicated project that affects peoples livelihood. If they were, this project would not be in the poor state it is in after 5 years and more than \$7 Million being spent.

Specific COHYST Recommendations:

1. Engage a properly qualified and independent private firm to audit and correct COHYST.

There should be a truly independent outside entity contracted to do a full and independent audit of this project from start to finish. They should then be empowered to make the necessary changes to both the management and technical approach to this project so that it might become Areal@ rather than academic.

The first question to be answered should be: Where is the provable evidence that there IS river flow depletion caused by groundwater pumping?

I have some suggestions of firms that might be appropriate choices that I can make available at the appropriate time and to the appropriate people.

2. It is past time to actually define COHYST.

There must be real emphasis on defining exactly what this model will be expected to do, how it will be used, and how conflicts between model predictions and field results will be resolved. This is normally done very early in any engineering development project and should have been done immediately upon starting the project.

3. There MUST be a REAL field test program developed and executed.

While those involved may claim there is such a plan, any such plan is completely inadequate in view of the probable future impact to landowners, farmers, and the entire state.

4. The model MUST be made to match field test results.

There is currently not an adequate plan to correct model results which disagree with field tests. In fact, at a June 26, 2003 briefing to CPNRD, one of the senior modelers on COHYST specifically stated that ~~A~~the model will not be changed@if it does not match field results. This exposes the landowner/producer to unnecessary future restrictions and harm.

The existing approach goes completely against normally accepted engineering practice in such a situation and absolutely **MUST** be corrected. This problem must be addressed in a way that reflects the variations in aquifer characteristics in much smaller regions than currently defined.

5. The Aregional model@ concept should be abandoned.

Like other items relative to COHYST, it has been difficult to get a precise definition of the plan for the area to be covered and verified for a COHYST region. It has, however, been stated, that testing will cover a 16 square mile area.

This is completely flawed. For this to work, the aquifer would need to be homogenous and uniform over a huge geographical area in both horizontal and vertical planes. That is clearly NOT the nature of the aquifer. My own experience clearly shows that.

There needs to be a much smaller area covered by testing, perhaps to the level of one quarter section (160 acres). And the model needs to be verified to be accurate to the level of any individual well which will be the subject of regulatory control actions based on the model.

To do this any other way would simply mislead the decision makers and probably harm the landowner and producer from unnecessary restrictions based upon faulty results from the model.

6. A form of Executive Management Control must be implemented for COHYST.

I had originally recommended that the Central Platte NRD board needed to take direct control of COHYST by engaging an independent outside firm as the overall manager. However, I now realize that is the wrong recommendation. The CPNRD board is simply not capable of managing this. Nor is any other NRD board or entity currently involved in the project likely to be. Even if political interests were not an issue, the capability is simply not there.

It is my specific recommendation that the Office of the Governor needs to perform the Executive Management control of COHYST, with the Governor as the responsible executive. The independent outside firm engaged as the overall project manager needs to report directly to him. It is the only way I see to avoid the political conflicts of interest which currently are causing COHYST to be a failed project.

This concept is comparable to the **Aprime@** or **Ageneral@** contractor approach to complex projects. The firm selected should specifically NOT be part of the **Ahydrological community@**. And, the firm must have a demonstrated record of independent thinking, sound and practical engineering, and deployment of systems that actually work and affect peoples lives.

This firm absolutely must NOT be a research firm.

7. It is time for honesty, candor, and consistency on the part of COHYST participants.

There MUST be a change in the conduct of the management and staff of the program so that potentially effected parties can get accurate, consistent, and timely information about how this might affect their futures. No more evasion/inconsistency/incorrect information from COHYST participants.

There are additional details in my 10/23/03 presentation to the CPNRD Water Resources Committee which is available on the Internet at:

<http://www.platterivertruth.org/Briefing-23Oct03-all.PDF>

I have never before encountered so much disinformation, evasion, and untruthfulness.

The above COHYST recommendations have previously been made to the Central Platte NRD, and declined with no meaningful consideration of them by their board. They will claim they have considered them, but that is simply another example of deception by those who are misleading the entire state of Nebraska. It is imperative to the states future that these problems be constructively addressed.

Conclusion

In contrast to what those bureaucrats, politicians, environmentalists, and misguided elected and appointed officials - who are intent on increasing their control over irrigation water - would like the landowners, producers, and other citizens of Nebraska to believe:

- The Platte River flows are NOT being reduced by use of irrigation wells
- The Platte River is NOT being dried up at Grand Island by use of irrigation wells
- The Ogallala Aquifer is NOT being depleted on a long-term basis
- COHYST is NOT the answer to all future water resource understanding in the Platte Valley - as it is currently implemented

S COHYST is currently a defective effort that has wasted 5 years of time and \$7 M of precious money which - if not corrected - will give wrong results and put the burden of proof on the farmer to prove it wrong.

S COHYST threatens the future of irrigated agriculture throughout the Platte Valley

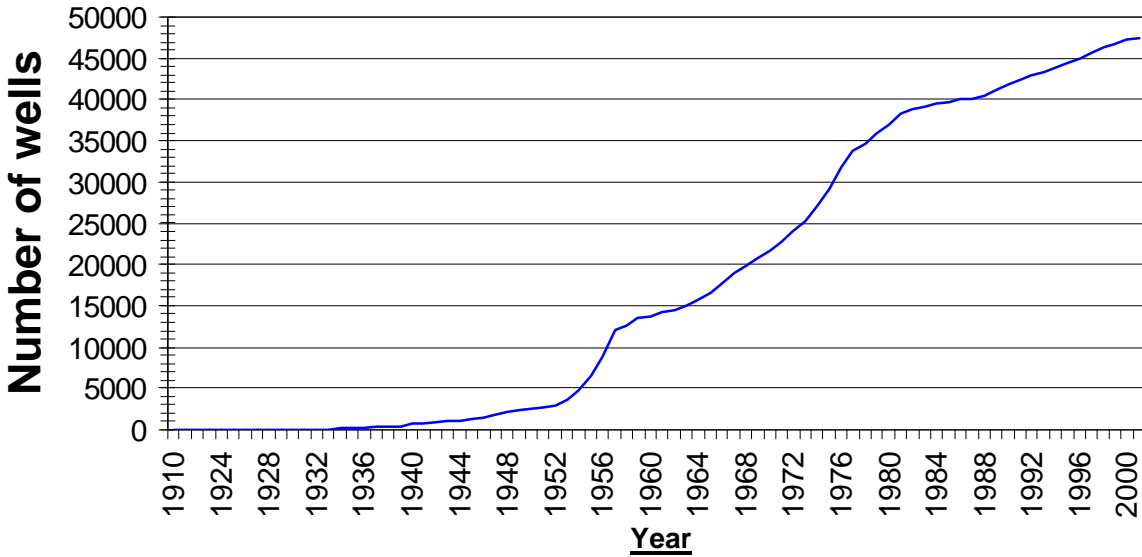
It is time for landowners, producers, and other citizens to demand that water policymakers and all elected and appointed officials begin to address these issues based on sound science, good engineering, and TRUTH.

This needs to change NOW - before it permanently destroys the economy of the state of Nebraska.

It is time the citizens of Nebraska stop being deceived

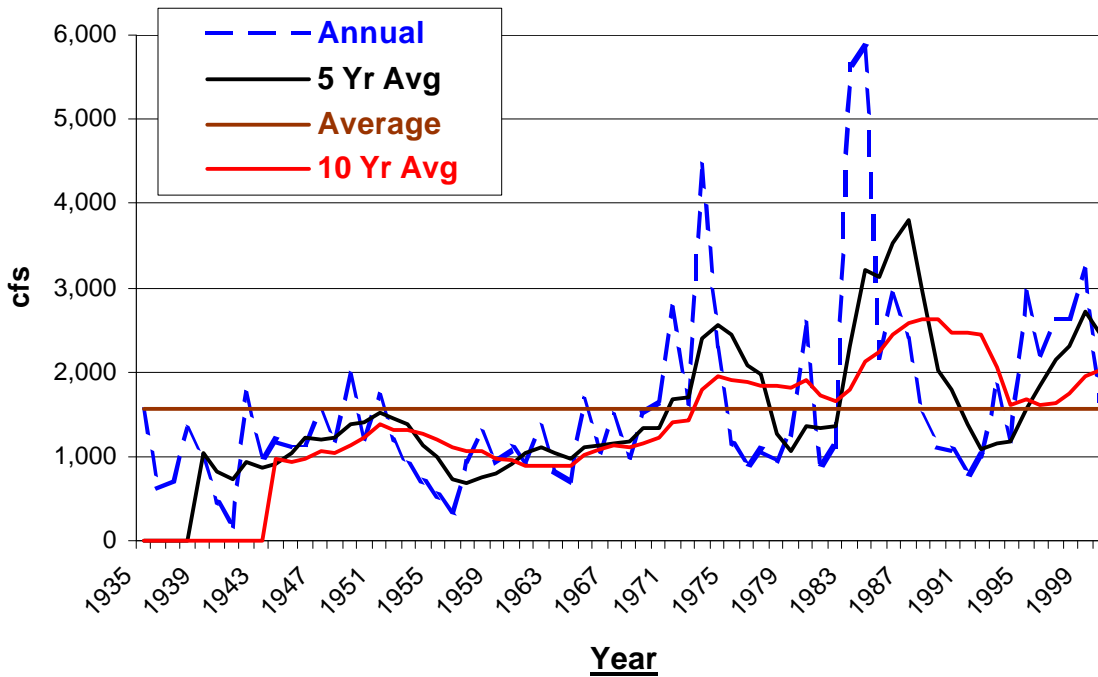
Wells vs. Flow at Grand Island

COHYST Area Irrigation Wells - Cumulative



www.platterivertruth.org [source: CPNRD]

Grand Island Average Annual Flow - cfs

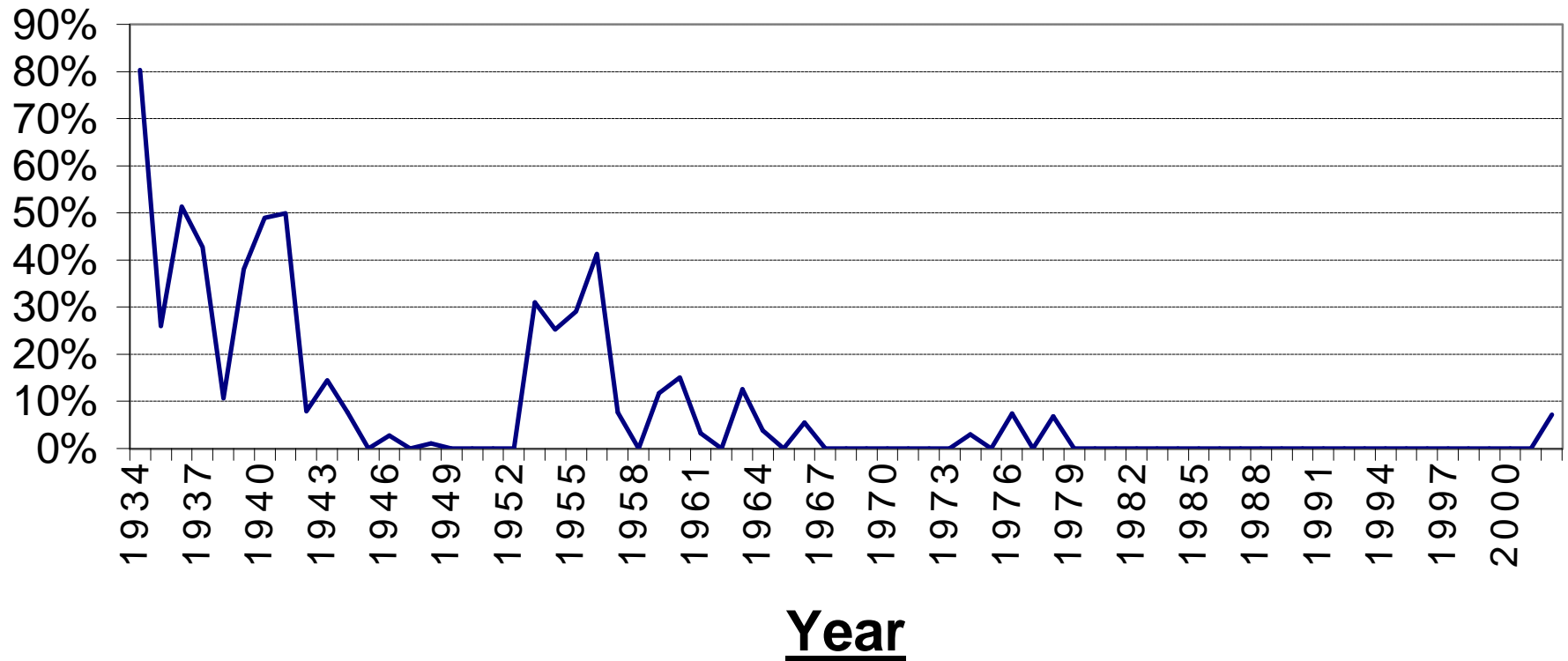


www.platterivertruth.org [source:USGS]

% Zero Flow days at Grand Island

[Smaller % means fewer days when river is dry]

[Pre-development period is much worse]



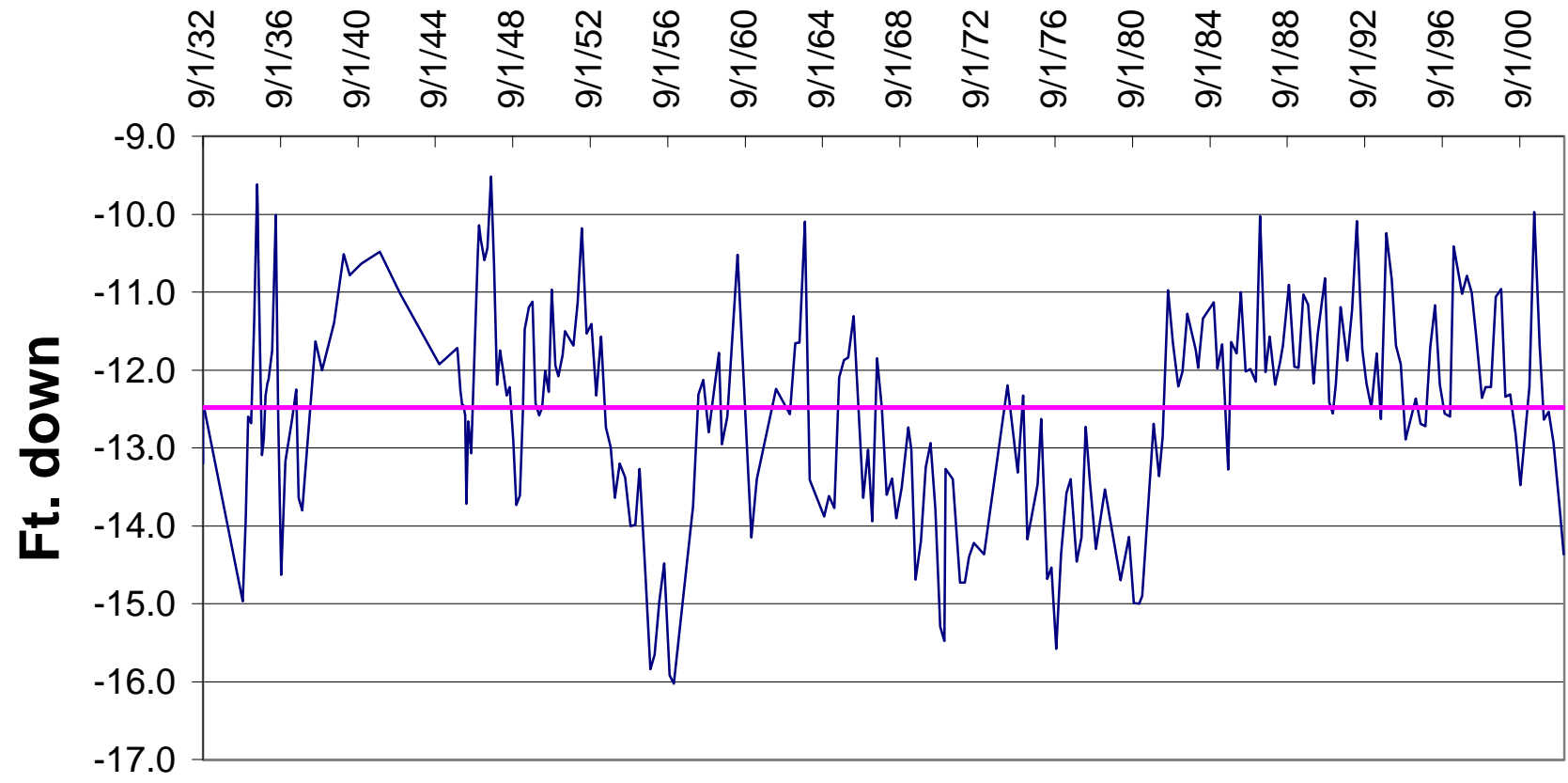
Summary by Year

[From USGS gaging station at Grand Island]

Yr	Total Days	No of 0 flow days	% 0 flow days		Yr	Total Days	No of 0 flow days	% 0 flow days
1934	275	221	80%		1969	365	0	0%
1935	365	95	26%		1970	365	0	0%
1936	366	188	51%		1971	365	0	0%
1937	365	156	43%		1972	366	0	0%
1938	365	39	11%		1973	365	0	0%
1939	365	139	38%		1974	365	11	3%
1940	366	179	49%		1975	365	0	0%
1941	365	182	50%		1976	366	27	7%
1942	365	29	8%		1977	365	0	0%
1943	365	53	15%		1978	365	25	7%
1944	366	28	8%		1979	365	0	0%
1945	365	0	0%		1980	366	0	0%
1946	365	10	3%		1981	365	0	0%
1947	365	0	0%		1982	365	0	0%
1948	366	4	1%		1983	365	0	0%
1949	365	0	0%		1984	366	0	0%
1950	365	0	0%		1985	365	0	0%
1951	365	0	0%		1986	365	0	0%
1952	366	0	0%		1987	365	0	0%
1953	365	113	31%		1988	366	0	0%
1954	365	92	25%		1989	365	0	0%
1955	365	106	29%		1990	365	0	0%
1956	366	151	41%		1991	365	0	0%
1957	365	28	8%		1992	366	0	0%
1958	365	0	0%		1993	365	0	0%
1959	365	43	12%		1994	365	0	0%
1960	366	55	15%		1995	365	0	0%
1961	365	12	3%		1996	366	0	0%
1962	365	0	0%		1997	365	0	0%
1963	365	46	13%		1998	365	0	0%
1964	366	14	4%		1999	365	0	0%
1965	365	0	0%		2000	366	0	0%
1966	365	20	5%		2001	365	0	0%
1967	365	0	0%		2002	273	26	7%
1968	366	0	0%					

— Measured
— 70 yr avg -12.5 ft

Water Level - 1932 - 2002 **Original Well G-101788**



Location: N40deg-54.383min, W100deg-05.006min

www.platterivertruth.org [source: NE DNR/CNPPID]