From: "PHILLIP BARR" <pharb2@msn.com>
To: <allegation@nrc.gov>, <tannis.fox@state.nm.us>, "Kathy Helms" <khelms@frontiernet.net>
Date: 2/27/06 11:36AM
Subject: Ogallala aquifer

I apologize for all the emails, but I find I don't have one for the aquifer map showing a state or NRC email address together.
I just need a record.
I believe there is a possibility this map is accurate and both the state and nrc know the water is under the LES plant site.
That's my allegation.
Phillip Barr
Lea county

(even shows the email headers)

==========

Wed, 23 Mar 2005 03:20:32 +0000
X-Originating-IP: [65.54.175.204]
X-Originating-Email: [pharb2@msn.com]
X-Sender: pharb2@msn.com<mailto:pharb2@msn.com>
From: "PHILLIP BARR" <pharb2@msn.com<mailto:pharb2@msn.com>>
To: "Phillip Barr" <pharb2@msn.com<mailto:pharb2@msn.com>>
Subject:
Date: Tue, 22 Mar 2005 20:19:12 -0700
MIME-Version: 1.0
Content-Type: multipart/related;
type="multipart/alternative";
boundary="----=_NextPart_000_0049_01C52F1C.69B86890"
X-Priority: 3
X-MSMail-Priority: Normal
X-Mailer: MSN 9
X-MimeOLE: Produced By MSN MimeOLE V9.10.0011.1703
Seal-Send-Time: Tue, 22 Mar 2005 20:19:12 -0700

----- Original Message -----
From: PHILLIP BARR<mailto:pharb2@msn.com>
To: Phillip Barr<mailto:pharb2@msn.com>
Sent: Tuesday, March 22, 2005 9:19 PM

[Home<http://www.rra.dst.tx.us/> | About RRA<http://www.rra.dst.tx.us/aboutrra.cfm> | RRA Activities<http://www.rra.dst.tx.us/activities.cfm> | Information Repository<http://www.rra.dst.tx.us/Info/> | Feedback<http://www.rra.dst.tx.us/Contact/> | Search<http://www.rra.dst.tx.us/Search/>]

The Ogallala Aquifer

Image by Texas Tech University<http://www.ttu.edu/>

The Ogallala aquifer is a huge underground reservoir created millions of years ago through geologic action. The underground water supply is west of the Mississippi River and east of the Rocky Mountains. It includes the following states: South Dakota, Nebraska, Colorado, Wyoming, Kansas, Oklahoma, Texas, and New Mexico. The reservoir covers a total area of 800 miles north to south and 400 miles east to west. This region is a part of the Great Plains

that is referred to as the High Plains<http://www.rra.dst.tx.us/c_t/history/Land/HIGH%20PLAINS.cfm>.

In order to assess the current problems facing the Ogallala aquifer it would be helpful to know a little about its history. The aquifer developed over millions of years through erosion of the Rocky Mountains depositing rock and sediment at the base of the mountain range. Stream beds at the base of the mountain range were filled and forced the rivers to take on new directions across the nearby countryside. The debris that was left behind by the streams formed the High Plains. This debris was porous and permeable to water. The new landscape formed a "trough" that holds water to depths of 500 feet.

The biggest reason for concern is the fact that the aquifer has been cut off from almost all of its natural recharging sources. The Rocky Mountains have not supplied the aquifer for over a thousand years. The climate of the High Plains today is classified as a semi-arid region receiving 15"-20" of rainfall a year. When it does rain the evaporation rate is very high due to the dry air and high winds. Many of the rivers including the Platte, Republican, Canadian<http://www.rra.dst.tx.us/c_t/Rivers/CANADIAN%20RIVER.cfm>, and Arkansas actually drain the aquifer because they have water tables below that of the aquifer. Even if a river does act as a source, it only does so when it is able to flow. Another reason that rain water is not effective is that caliche is found just under the soil surface in many areas. Caliche is a lime-like material with a very low porosity that prevents infiltration. Playa lakes<http://www.rra.dst.tx.us/c_t/history/Land/PLAYAS.cfm> are also found on the Ogallala aquifer. These lakes are simply depressions in the High Plains that collect water but do not contribute to infiltration greatly due to rapid evaporation rates. For these reasons the High Plains were a lifeless desert region until the early to mid 1900s.

The problem facing The Ogallala aquifer today is not knowing how long the water supply will last. The first recorded use of the aquifer for irrigation purposes was a hand dug well in 1911. Many of the first wells were dug primarily to meet the needs of towns that were forming on the High Plains. These wells were restricted to 50 feet or less. Windmills<http://www.rra.dst.tx.us/c_t/History1/WINDMILLS.cfm> were the primary mechanism used in drawing water. Through technological advances and the invention of the "horizontal centrifugal" pump, wells were being dug to depths of 200 feet or more. The newer pumps allowed a flow rate of 1000 gallons per minute (gpm) compared to only a few gpm generated by the windmills. Wells were being installed at a rate of approximately 80 per year in the 1950s. During this time Colorado became concerned about the future of the aquifer. The Colorado legislature passed the Colorado Water Management Act in 1965. The act established Designated Groundwater Basins, Groundwater Management Districts, and bases for controlling well drilling. Realizing that this act would put restrictions on the number of wells permitted, those farmers who had put off drilling wells went ahead with the installations before they could be denied. This surge caused 471 wells to be installed in 1967. Situations such as these caused a great deal of strain on the aquifer, and researchers today are trying to find ways to help and conserve the aquifer's water supply.

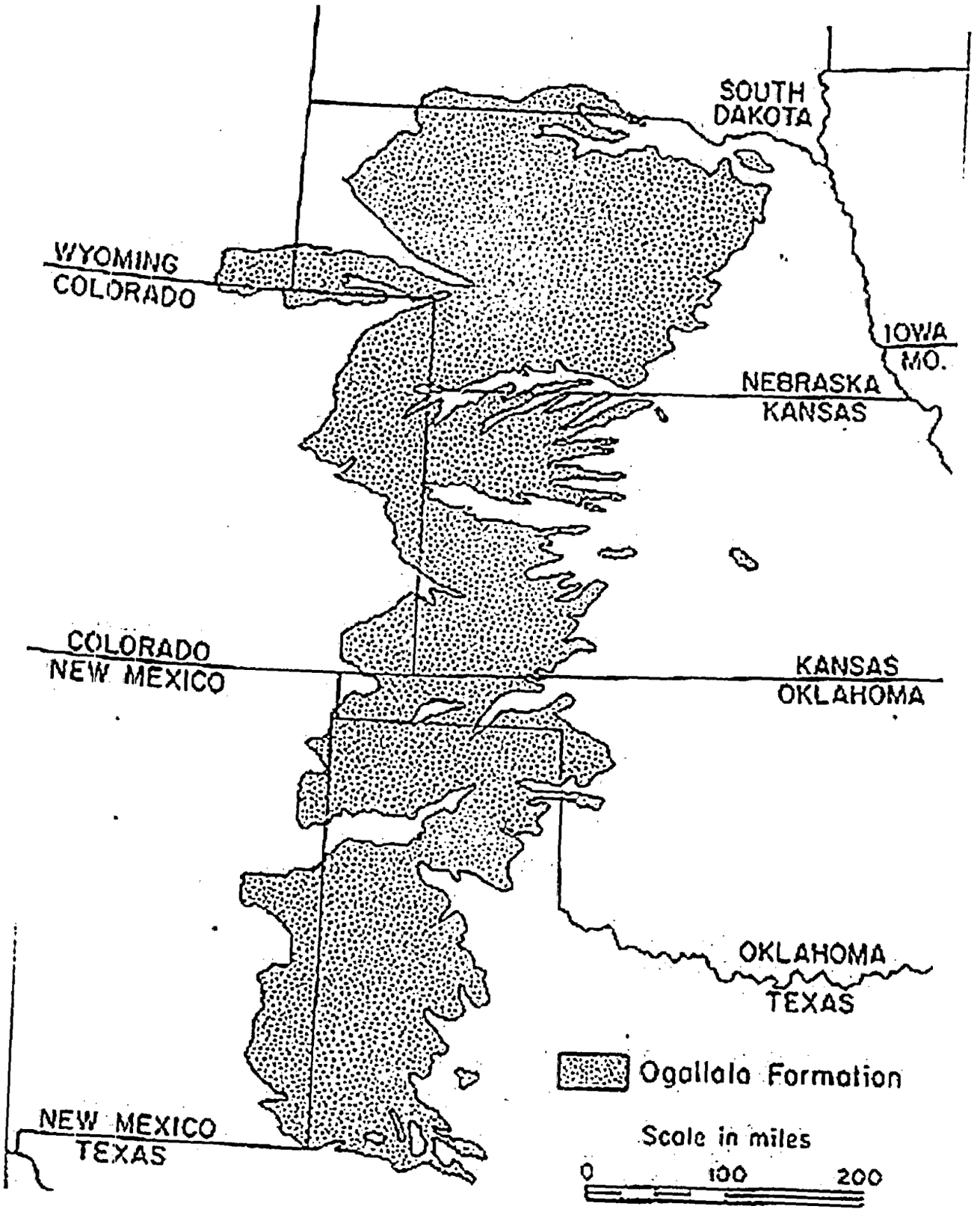
A method referred to as "irrigation scheduling" was devised as a way to make better use of the water supply. By monitoring soil moisture and natural rainfall along with other important weather conditions, farmers can apply pre-calculated amounts of water to their crops. The key is to make sure the plants have adequate water during critical times and short on water at less critical times during the growth cycle. Crops with lower water requirements have also been introduced. Even if this method is applied perfectly it would not eliminate the depletion of water from the aquifer.

Another method is to quit irrigating certain stretches of land. This has a greater impact on reducing the water removal rate, but it is unpopular with the farmers who have money invested. Governmental agencies do not have the authority to remove land from irrigation, but due to lower water tables the cost of irrigation is rising and at the same time causing land to be retired.

The truth of the matter is that if the High Plains are to continue to be of any agricultural

importance new water sources must be found. Potential water supplies could be the collection and storage of natural rainfall before it runs off or evaporates, increasing rainfall through seeding clouds (still being researched), and most importantly new sources of water will have to come from outside the High Plains region.

Credit :
http://www.eos.ncsu.edu/bae/courses/bae472/perspectives/1996/arblanke.html<http://www.eos.ncsu.edu/bae/courses/bae472/perspectives/1996/arblanke.html>


SOUTH DAKOTA
WYOMING
COLORADO
IOWA
MO.
NEBRASKA
KANSAS
COLORADO
NEW MEXICO
KANSAS
OKLAHOMA
OKLAHOMA
TEXAS
NEW MEXICO
TEXAS
Ogallala Formation
Scale in miles
0
100
200

Mail Envelope Properties (44032A8A.2AF : 23 : 53935)

Subject:	Ogallala aquifer
Creation Date:	2/27/06 11:35AM
From:	"PHILLIP BARR" <pharb2@msn.com>
Created By:	pharb2@msn.com

Recipients

nrc.gov
OWGWPO02.HQGWDO01
ALLEGATION

frontiernet.net
khelms (Kathy Helms)

state.nm.us
tannis.fox

Post Office	**Route**
OWGWPO02.HQGWDO01	nrc.gov
	frontiernet.net
	state.nm.us

Files	**Size**	**Date & Time**
MESSAGE	7249	02/27/06 11:35AM
TEXT.htm	11757	
image001.jpg	132485	
Mime.822	203914	

Options

Expiration Date:	None
Priority:	Standard
Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard