



# **City of Grand Island**

**Tuesday, June 07, 2011**

**Study Session**

## **Item X3**

**Discussion Concerning City Dewatering Wells**

**Staff Contact: John Collins**

# **Council Agenda Memo**

**From:** John Collins, Public Works Director

**Meeting:** June 7, 2011

**Subject:** Discussion on City Dewatering Wells

**Item #'s:** 3

**Presenter(s):** John Collins, Public Works Director

## **Background**

On December 21, 1998 the City entered into an agreement with the Central Platte Natural Resources District (CPNRD), which provided for the installation of test and monitoring wells. These wells were placed in the following areas, Cambridge Road, Sun Valley Avenue, Nevada Avenue, Villa Mar Dee Avenue, and Phoenix Avenue, and allowed for studying the success of lowering groundwater levels.

Olsson Associates was the consulting engineering firm selected to conduct the study. The study recommended the installation of a series of vertical wells and a pipeline to carry the water to the Platte River. When the study was completed in September 2000 the opinion of probable cost for the construction of the capital improvements was \$13,063,000, with an annual cost to amortize these improvements at \$1,233,100. The annual operation and maintenance costs were estimated to be at \$341,000.

## **Discussion**

It has been found that the City Council authorized the agreement between the City & CPNRD during the term of the planning period, which was not to exceed thirty-six (36) months from the date of execution.

The City has been powering and providing for maintenance and repairs of these wells 7+ years past the authorization given by Council.

At this time Staff needs direction on how Council wishes to proceed with these wells. The discussion needs to happen regarding whether City will continue to provide for the power, maintenance, and repairs or turn them over to the residents in the affected areas.

## **Conclusion**

This item is presented to the City Council in a Study Session to allow for any questions to be answered and to create a greater understanding of the issue at hand.

It is the intent of City Administration to bring this issue to a future council meeting for the action Council wishes to take on this matter.

# Dewatering Wells



## Interlocal Agreement with the CPNRD

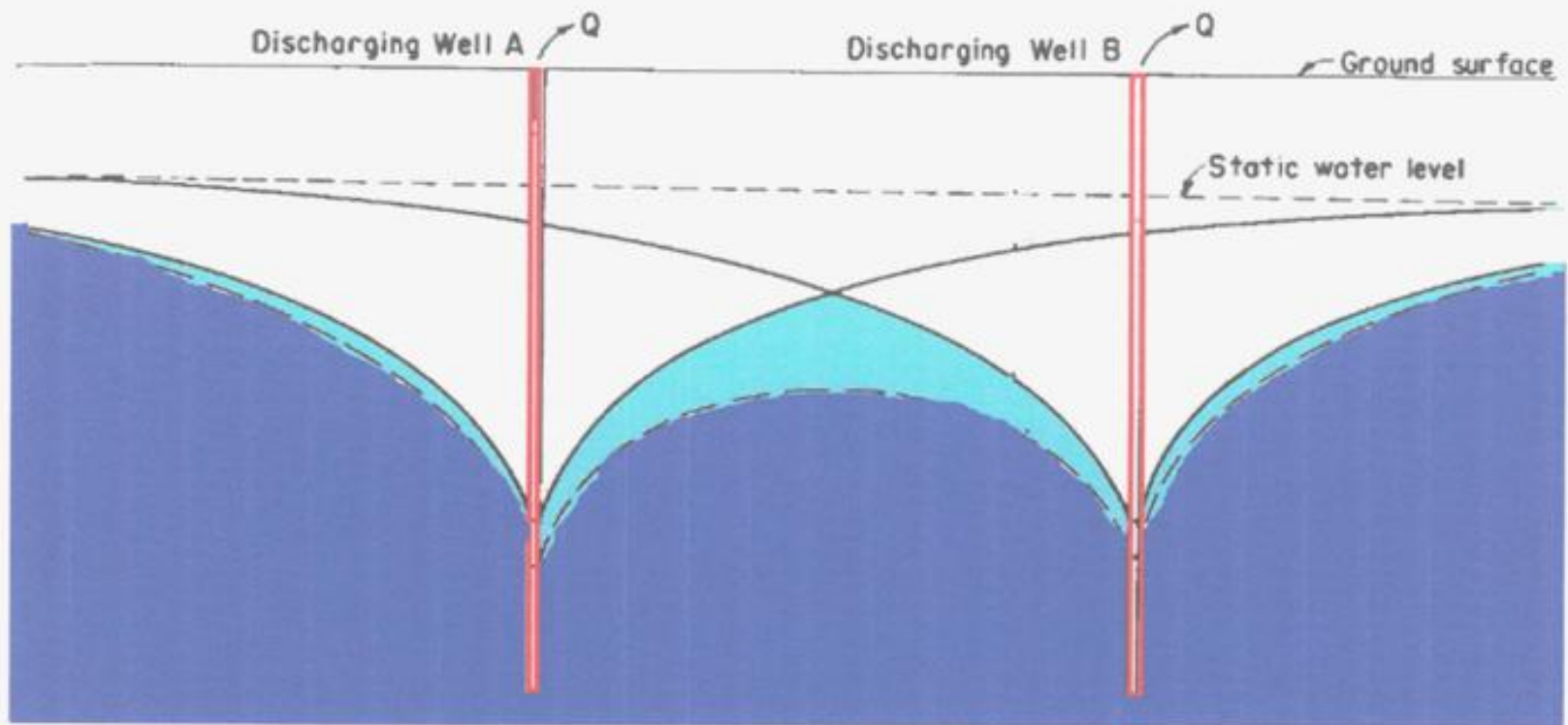
- Executed December 21, 1998 and amended October 25, 1999
- Demonstration project to test the feasibility of dewatering the City
- Cost split 50/50
- 36 month limit with the option to amend to extend
- Amendment dealt with responsibilities during planning period.

## Final Report

- Approved September 26, 2000
- Recommended \$13million dewatering project (preliminary estimate)
- Outlined alternatives for the design.

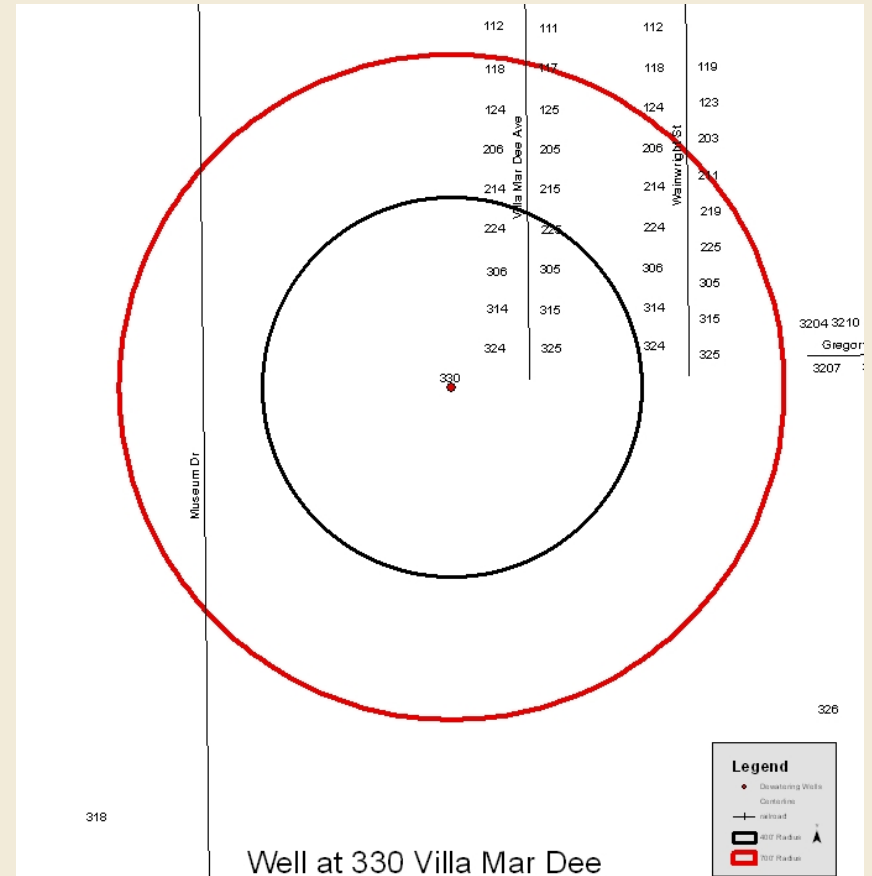


### Concept

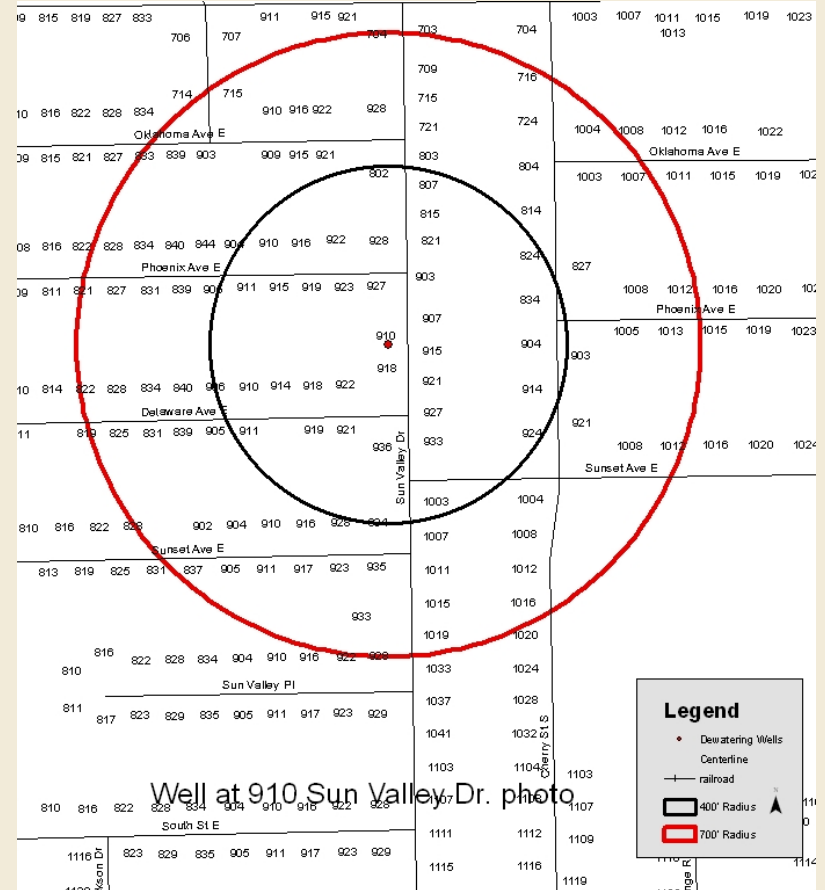
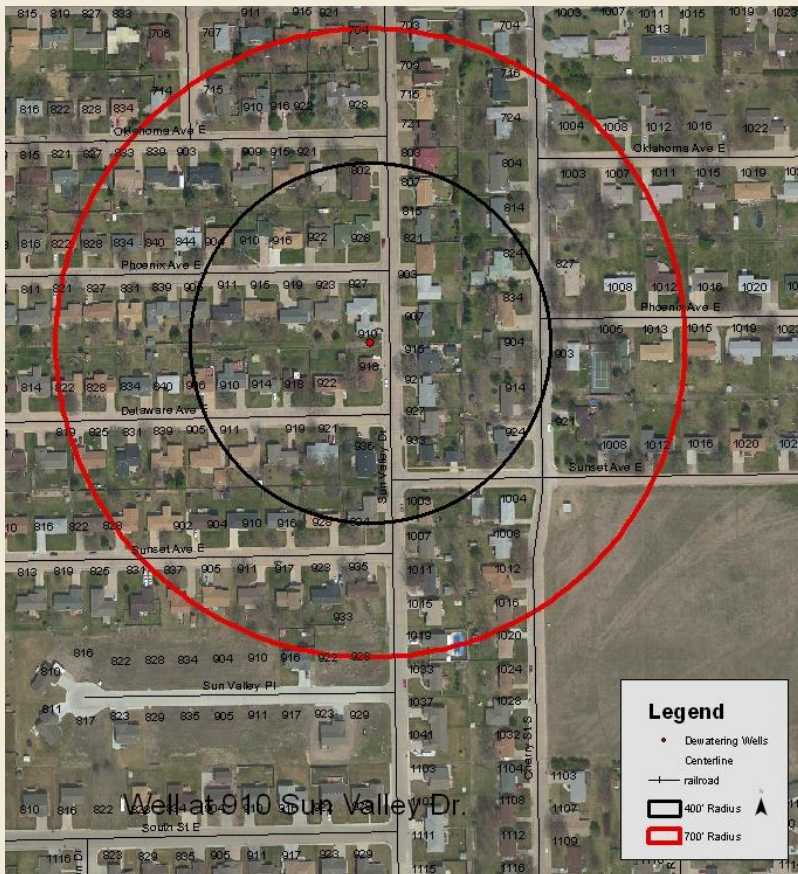




## Villa Mar Dee

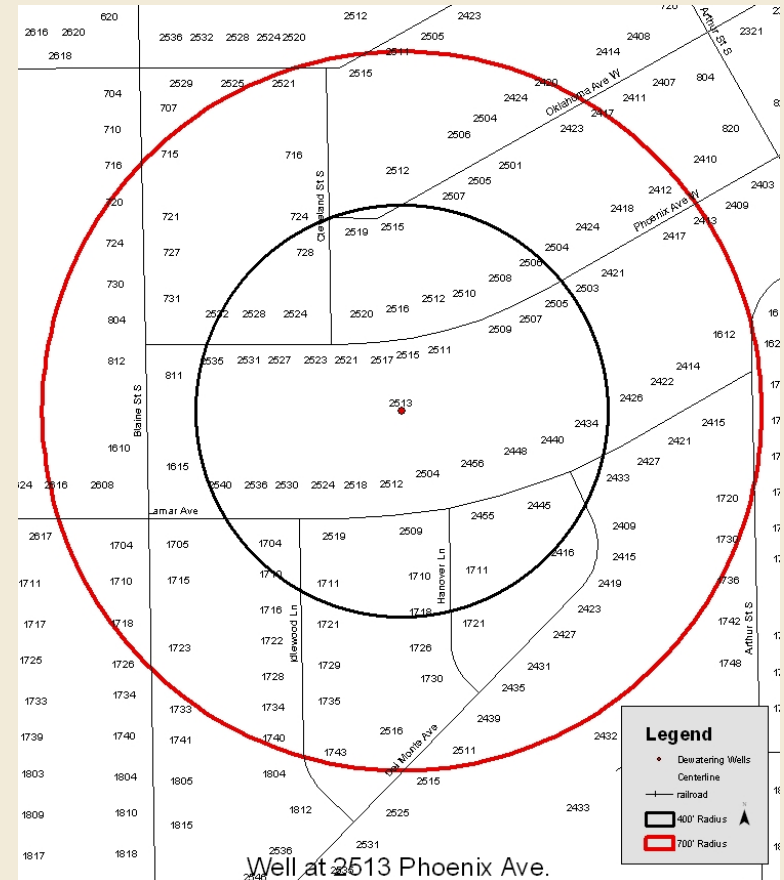
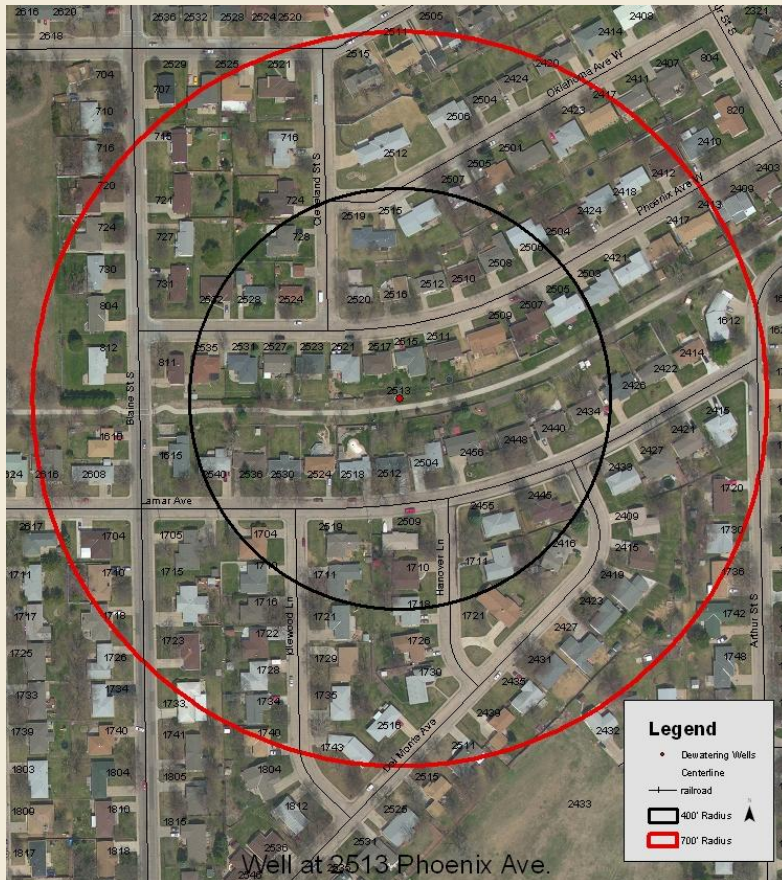


## Sun Valley Drive

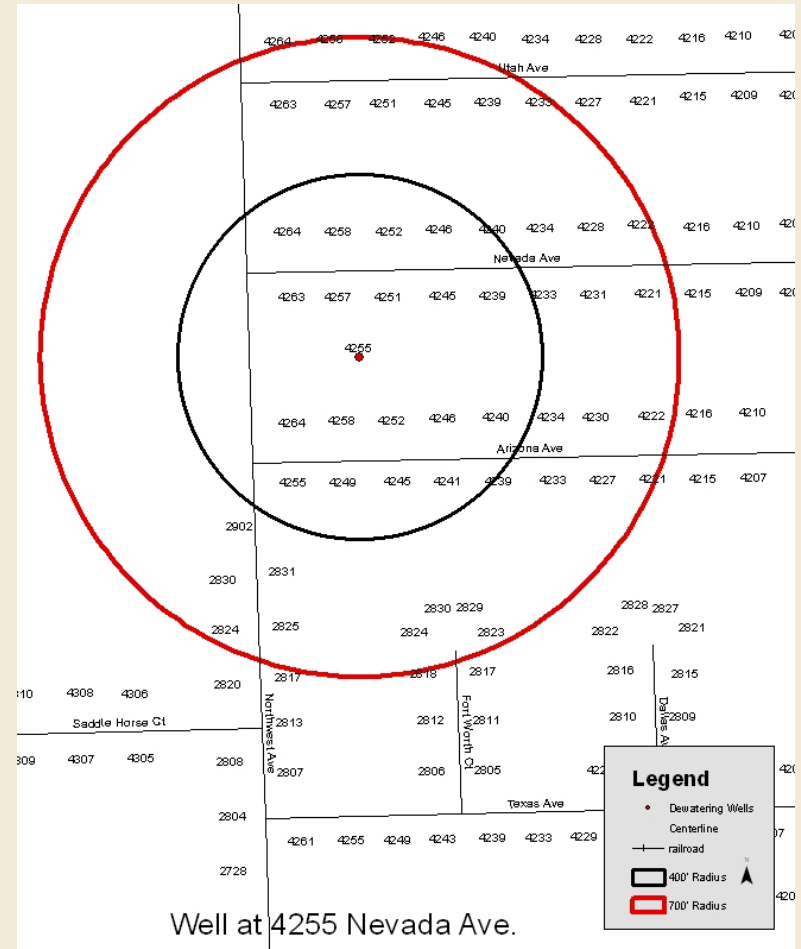
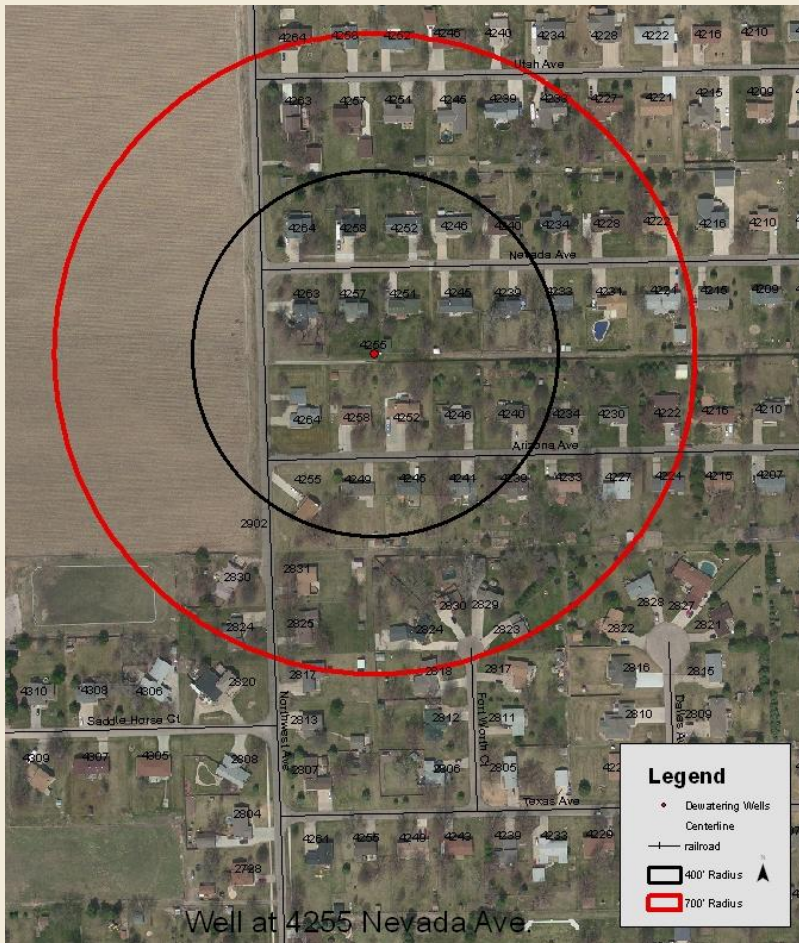




## Phoenix Avenue

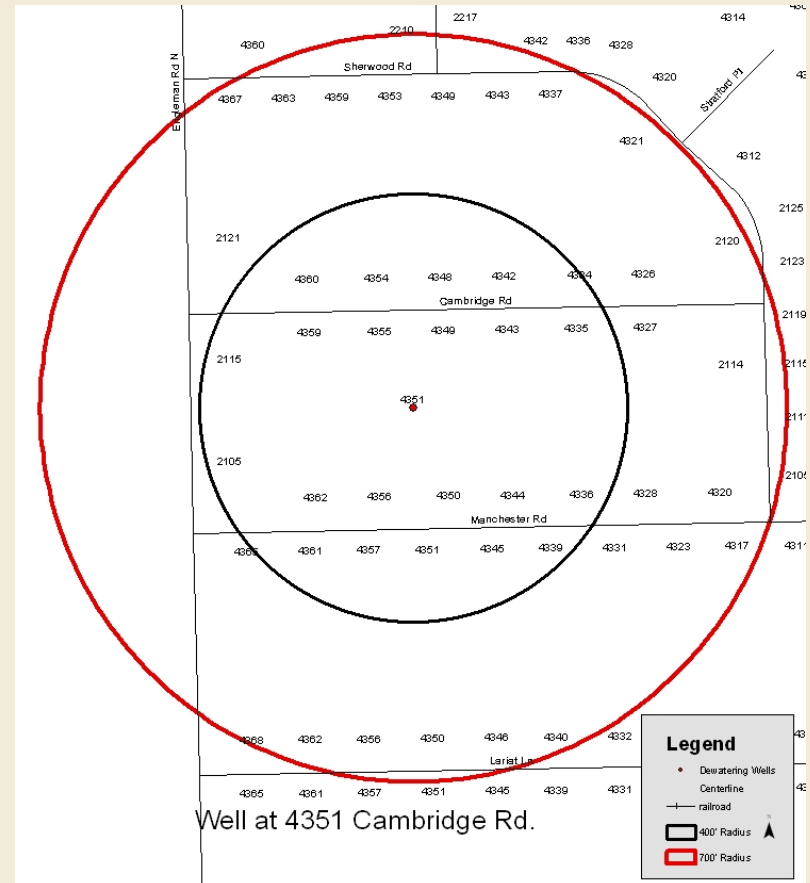
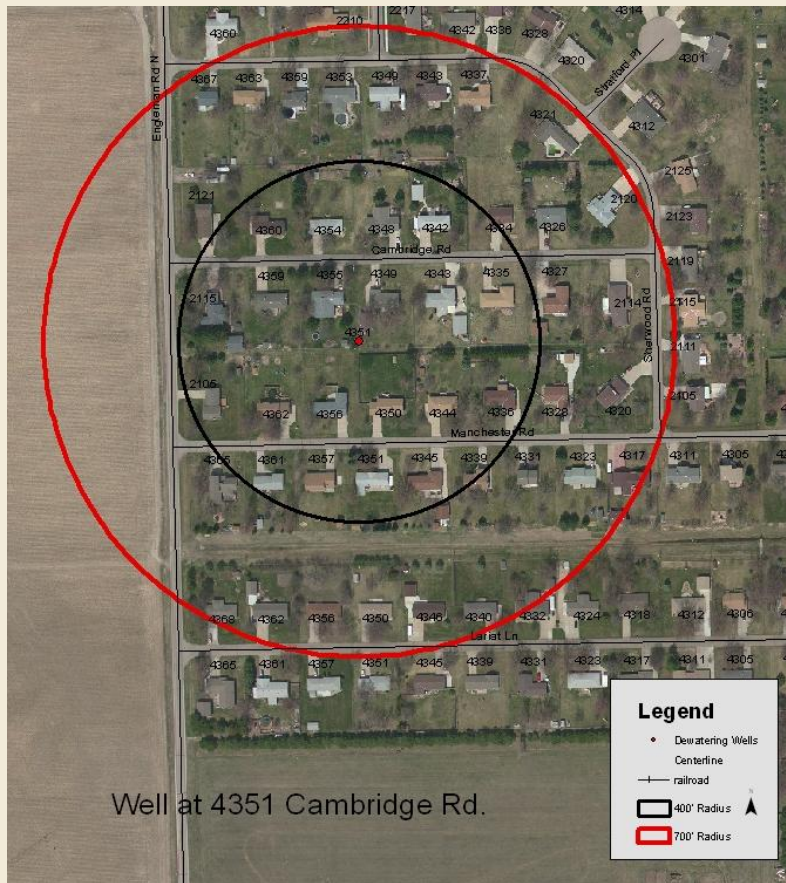


## Nevada Avenue





## Cambridge Road



## Influence

	400' radius	700' radius
Villa Mar Dee	29	9
Sun Valley Drive	118	44
Phoenix Avenue	128	46
Nevada Avenue	54	22
Cambridge Road	24	50
	353	171

### Annual Cost

- 🌊 Power \$15,000
- 🌊 Testing \$7,200
- 🌊 Repair: \$5,000
- 🌊 Maintenance has not been tracked

Note that the pumps are nearing the end of their 15 year design life

## Issues

- The City has powered these 5 wells without authorization from the Council
- The pumps are near the end of their design life and will need to be replaced
- Only a few properties benefit (most dewatering wells are private)



### Options

- 🌐 Continue to operate these 5 wells
- 🌐 Add additional wells
- 🌐 Reconsider the NRD's proposal