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**CENTRAL IOWA REGIONAL DRINKING WATER COMMISSION**  
**April 23, 2002 AT 6:00 P.M**  
**Ankeny Public Services Building - 210 S. Ankeny Blvd., Ankeny**

The seventh meeting of the Central Iowa Regional Drinking Water Commission was called to order by Chairperson John McCune at 6:15 P.M. All participants introduced themselves. Present were:

City of Altoona - Vern Willey (Ex-O)  
City of Ankeny - Jolee Belzung (Ex-O), Merle Johnson, (Mayor), Gary Welch (Alt. Rep)  
City of Bondurant – Al Ihde (Rep)  
City of Carlisle – Neil Ruddy (Ex-O)  
City of Clive - Paul Leighton (Rep)  
City of Johnston - Aaron Schmidt (Rep)  
City of New Virginia - Norville Huston (Rep)  
City of Norwalk - Dave Hixenbaugh (Rep), Dean C. Yordi (Ex -O)  
City of Pleasant Hill - Tom England (Alt. Rep)  
City of St. Charles – Ronald Bedford (Rep)  
City of Urbandale - John McCune (Rep), Richard Foust (Ex-O)  
City of Waukee - John R. Gibson (Ex-O)  
City of West Des Moines - Jim Wallace (Rep) Larry Anderson (Ex-O)  
Des Moines Water Works - Louise Moon (Rep), Connie Steffen (Staff), LD Mc Mullen (Ex-O)  
Indianola Municipal Utilities – Lou Elbert (Ex-O)  
SE Polk Rural Water - Dan Lundberg (Rep)

Approval of the January Minutes – Dan Lundberg made the motion to approve the January meeting minutes, seconded by John Gibson. The motion was approved. Jim Wallace noted that the fall CIRDW meeting will be held in October instead of in September as reported in the minutes.

New and Old Business:

- Shared Services Committee Report – Jim Wallace distributed information from the **Hexagram** website. No prices for the equipment are available. The committee has been trying to reach a salesperson. They have been told that if we purchase as a group we can receive a 5 percent discount, but we have been unable to determine the base price that will be discounted. It is the understanding that the price will be 5 percent less than if we purchased through normal channels. So far, 6,700 units have been installed in the Des Moines area. Johnston has some. Urbandale and Clive are exploring going to Hexagram. Hexagram units attach to the

meter. A Signal goes to a PC at a base once or twice a day. West Des Moines has drive-by meter reading to compare to.

The Shared Services Committee is developing a boilerplate **Request for Proposals (RFP)** to go out for various supplies that lots of utilities use. Hopefully we will get a better price to buy larger quantities. Larry Anderson distributed a draft RFP and asked that everyone take it with them and provide comments. The Shared Services Committee will meet again before the next Commission meeting to discuss the RFP and which items to purchase as a group. E-mail or send comments to Jim Wallace within one month.

L.D. McMullen asked about **leak detection** as a shared service. He suggested that it might be good to inventory who has what equipment. The Shared Services committee will pursue this. GPS is another possible shared service depending on who has equipment.

- Water Supply Planning Committee Report – L.D. McMullen reported that the Ex-Officios met. They went over the report put together by Urbandale water projections report. There was general comfort with the current year numbers in the report. The approach taken for projections to future years was a fair method. The average per capita consumption today was used and the population was projected. Future population x per capita consumption = future demand. The group reviewed reliable capacity versus maximum capacity. The reliable capacity is 114 million gallons per day (mgd). The total capacity is 146 mgd. We have adequate capacity through 2020, but then we have a shortage. We need to do something prior to 2020. By 2040, we can serve the average day, but we have a significant shortfall for the peak day.

We need some kind of a **peaking facility**. Aquifer Storage and Recovery (ASR) is suggested (or some other method). It doesn't make sense to provide peak capacity through tanks. They would be too big. We need treatment capacity or some other innovative method like ASR. If we provide treatment capacity at average day plus 25 percent, we will be able to store excess capacity in low flow times of the year to pull it back out in peak use times of the year.

Looking at today's **plant capacity**, we meet demand today through plant flow. In the future, we will need a combination of plant capacity and ASR. In 2040, we will need to add treatment plant capacity and ASR.

Looking at **geographical areas**, Mitchellville, Carlisle, and Indianola will remain separate from the metro area network.

- The **central area** has a stable population. Meeting demand in this area will not be difficult.
- The **west zone** (Clive, Urbandale, Waukee, Xenia, West Des Moines) is a large growth area. Current plant capacity will meet the demand. We will need piping improvements and probably some storage, but plant capacity will be okay.
- In the **south** there is large growth (3 times growth projected) but relatively small pumpages in total. The capacity is sufficient to meet demand. We may need piping improvements.
- The **east** also projects 3X growth. There is a current project underway to serve the new MidAmerican substation that will provide capacity to serve that growth. Additional infrastructure review/planning is needed as well.
- In the **north**, there is 5X growth. There is currently only one large feeder main. There is inadequate capacity with the current setup. It is difficult to expand pipelines from downtown to northern Polk County. We need to look at a new treatment plant south of Saylorville Lake to serve Ankeny, Polk City, and Johnston. It could be a twin to Maffitt at 25 mgd, with the ability to expand to 50 mgd. This will be a water rights issue in terms of being able to find that volume. There is a huge alluvial aquifer south of the

dam. It is 40 feet deep with great yield projected. There is iron in that water and probably nitrates. It will need treatment.

In summary, for the west, south and east we will need improved hydraulics plus peak hour storage. For the north, we need a new treatment plant. For all areas, we need ASR for peak capacity.

For **ASR**, some issues being studied are recovery percentage and water quality. We will be in Cycle 7 this year for the ASR in Ankeny. After Cycle 3, we saw a drop in yield. It has remained steady since then. USGS is working with DMWW to determine cause – partial collapse or clogging is suspected. We have some unknowns to research. Experience in other states leads us to think ASR will work. DMWW will work with USGS to develop a generic ASR design that can be adapted to various sites around the metro area. Generic means the base of the Jordan aquifer is at the same elevation everywhere. The surface elevation of the site will determine the depth to the Jordan. Drill a standard size well (18 – 24 inches diameter). The pump can be standardized. The controls can be the same. Only the depth and site plan will vary. Building several at the same time could result in substantial savings. USGS thinks the maximum capacity of an ASR well is 3 mgd. The ASR sites could be located in rings out from the Des Moines area. Near the Des Moines city boundary is the first ring. Near the suburb boundaries is the second ring. An ASR site is expected to cost \$1.1 million for an 18-inch diameter well, 2500 feet deep, and the pump. The electrical equipment might cost an additional \$200,000. A 3 mgd well would cost 50 cents per gallon produced per day. Normal water producing wells can be 1/2 mile apart if they have a common owner, although you may see a drawdown influence at that distance. Wells owned by separate entities are required to have a 1 mile separation. ASR wells can be closer. The Jordan Aquifer is fractured sandstone vs. fractured limestone in other ASR states. If you pump too fast, it can cause the well to pump sand, which is corrosive on the well casing.

Water rights means that equal amounts of raw water must be available to the various treatment plants. The Raccoon River Valley is not a good spot.

Peak days typically happen after a period of almost peak days. If capacity is not sufficient, we may not be able to refill storage tanks every day.

**Five subcommittees** were recommended by the Planning Committee:

- 1) ASR – Ankeny, Des Moines, Urbandale, Johnston, West Des Moines, Altoona, any others interested. Design this year. Build one next year. New ASR= 3mgd. Urbandale is acquiring property for new 2 mgd storage facility.
- 2) Westside – West Des Moines, Waukee, Clive, Urbandale, Xenia, Des Moines. Study hydraulics of the west side. Look for opportunities for piping changes. Do computer modeling of various scenarios. Look at peak hour storage and ASR locations. One year of analysis and modeling. Construction in Year Two.
- 3) North treatment plant – Ankeny, Johnston, Des Moines, Southeast Polk Rural Water, Polk City, others. New design of plant. Pilot work. Two years of design. Two years of pilot testing. Build in 5mgd increments?
- 4) Southeast side – Pleasant Hill, Southeast Polk Rural Water, Indianola, Warren Rural Water, Norwalk, Carlisle. Study hydraulics of the area. Look for opportunities for piping changes. Do computer modeling of various scenarios. Look at peak hour storage and ASR locations.

- 5) Watershed protection for surface water quality – issues and information to be developed by October 1 for election year influence. Surface water interests – Des Moines, Bondurant, Norwalk, New Virginia, Carlisle, others.

Connie Steffen will organize the first meetings of the subcommittees. Everyone will be notified of the meetings whether they have a primary interest in the group or not. Each subcommittee will meet at least twice before the July Commission meeting, and will report to the Commission at that meeting.

Other – It was recommended that **press releases** be developed to inform the public of the Commission's activities. John McCune and Louise Moon will be the spokespersons. They will report on progress and issues.

Members were encouraged to get others who are not in attendance to attend future meetings. It was recommended that an area-wide meeting be held to include all members of the group's boards and councils. Possibly at the October meeting.

**Jim Dressen** is going off the Urbandale Water Board. He will be recognized for his 19 years of service to the Urbandale Board on May 16.

Next Meeting - Altoona will host the July meeting, scheduled for July 23, 2002 at 6 p.m.

A motion was made and seconded to adjourn the meeting. The motion passed.

Submitted by Jolee Belzung